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DOCTORAL
CONFERENCE

ABSZTRAKTKÖTET

XI. INTERDISZCIPLINÁRIS
DOKTORANDUSZ KONFERENCIA
11TH INTERDISCIPLINARY
DOCTORAL CONFERENCE

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UNIVERSITY OF PÉCS



Pécsi Tudományegyetem
Doktorandusz Önkormányzat



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Dear Participants and Guests,

On behalf of the Doctoral Students Association of the University of Pécs, I would like to thank you for your participation in the 11th Interdisciplinary Doctoral Conference!

The last few years presented a serious challenge for everybody both in our professional and personal lives. Many of the PhD students all around Hungary faced difficulties when it comes to their academic progress, or their opportunities to present their research work.

The mission of the Interdisciplinary Doctoral Conference- ever since of its foundation more than a decade ago – was to provide opportunities for young researchers to connect with each other, and to give – and receive – feedback about their professional work.

I believe the Interdisciplinary Doctoral Conference achieved this goal, and over its many year long history it provided opportunities for the PhD students to strengthen their professional network, to present their latest findings and – not less importantly – to have fun with their peers.

Overall the success of this event shows, that the PhD students in Hungary are dedicated to further the horizon of their respective research fields, and to build and maintain a strong, healthy and collaborative community.

Finally, I would like to thank all the kind participants of the conference for choosing our event to present their latest research results, I hope we will meet again next year at the 12th Interdisciplinary Doctoral Conference!

Best regards,



Márton Balogh

president

University of Pécs

Doctoral Student Association

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AGRÁRTUDOMÁNYOK

AGRICULTURAL SCIENCES

Assessment of local climate strategies in Hungarian cities and the potential effects of the Ukrainian war on local climate policy

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Introduction: The effects of climate change on cities are one of the constant challenges of the nearest and distant future. A large part of the climate-relevant tasks must be carried out by the cities themselves. In the last 20 years, in addition to general environmental protection, GHG mitigation and other aspects of climate protection have become increasingly important in Hungarian cities. In the early 2020s, the first overall, comprehensive LCSs have been published.

Tasks: Municipalities' past climate protection projects have been implemented in connection with other strategies or local initiatives. Therefore, we formulated the main question of our study: Are the strategy documents fundamental pillars for climate governance, energy efficiency, and awareness in urban societies?

Methods: In our review, we compared the LCSs of 14 cities by scoring method to evaluate their goals and directions for action. Besides, we conducted 16 semi-structured interviews with local government actors and external experts to investigate in depth the challenges of local climate protection.

Results: Our analysis revealed that a large number of the assessed LCSs contain limited, narrow-spectrum objectives, are typically uniform documents and provide only partial solutions to local needs, with little or no innovation. Moreover, vulnerable groups are marginalized in both medium-term and long-term planning.

The aggregation of electricity and natural gas consumption data over the past two decades and the tasks set in the mitigation plans of the assessed LCSs show that the targets of the examined cities are not sufficient to meet the Hungarian national mitigation targets.

The municipalities did not even use their available resources to produce good-quality plans in many cases. Instead, they relied on central planning assistance and external experts rather than local experience, knowledge, and the benefits of participatory planning. The measures and activities outlined in the LCSs were adopted from other development plans, resulting in reverse mainstreaming planning.

Conclusions: Reverse mainstreaming planning prevents the document from becoming a strong, stand-alone action plan so that climate protection can continue to take a back seat in medium- and long-term planning. This has not eliminated the risk of creating serious gaps, financial redundancies, and possible overlaps in climate protection planning in municipalities.

Keywords: local climate strategy, urban climate governance, city ranking, reverse mainstreaming, Hungary

Importance of small agricultural innovations for empowering farmers in Serbia

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Serbia is a mainly rural area where the agriculture sector plays a key role in socio-economic development. It possesses almost 3.5 million ha of the utilized agricultural land maintained by more than half a million farm-households. Serbia is famous for the production of raw food materials like cereals, corn, sugar beet root, apples, plums, poultry, pork, and dairy products and their distribution in raw condition rather than food processed. Despite the high boost of the Agriculture 4.0 technological revolution globally, still, a high level of the extensive and traditional way of production exists to a high extent, with a large number of small scaled producers who generally cannot afford high technological investments.

Based on the evaluation of the secondary data, desk, and content analysis of small tech providers the final observation pointed out that a significant lack of R&D investments and activities, low numbers of innovators and research organizations but with high competencies and adequately tailored technological solutions launched to the agricultural market exist. Additional obstacles that appear when it comes to the consumption of small agricultural innovations are limited access to the ICT infrastructure in rural areas, unwillingness to utilize them, low purchase power, lower education, and insufficiently researched farmers' needs toward technological developments such as Internet of things devices, AI, MLM, smart farm data management tools and etc.

After all, the aim of this paper is to point out the gaps and provide recommendations on what direction distribution of innovation resources shall be driven in order to help agricultural producers to grow faster and adapt to the global inno-technological markets, as certain benefits are numerous such as improving food quality and safety, support decision-making in the production processes, lower risks and increase efficiency.

Keywords: innovation, developments, agriculture sector, Serbia

Effect of Agronomic Factors on yield of Sweet corn (*Zea mays* L.). A review.**Hajer Mohamed Ibrahim Sidahmed¹, János Nagy²**¹National Center for Research, Medicinal and Aromatic Plants Research and Traditional Medicine Institute. Department of Agrotechnology, Sudan²Institute of Land Utilisation, Technology and Regional Development, Faculty of Agricultural and Food Sciences and Environmental Management, University of DebrecenE-mail address of the first author/ presenter: hajermohamed@agri.unideb.hu

Sweet corn (*Zea mays saccharata* L.) is one of the alternative foodstuffs that can be used to meet Those needs. Sweet corn contains the nutrients needed by the human body and is a popular food Item. Yield stability is one of the critical indicators for agricultural sustainability. Environmental complexity includes weather, soil, fertilization, and tillage methods diversely influence stable crop production. Modern corn (*Zea mays*) yields are largely the result of the interaction between improved genetics and agronomy. Regarding genetics, tolerance to biotic and abiotic stresses has been significant . wide genetic variation for biomass yield and soluble sugars content suggesting that those traits can be included as complementary traits in sweet corn breeding programs. Fertilizer is one of the important factors in crop cultivation which aims to increase crop yields, but it must be accompanied by proper fertilizer management in order to obtain the expected crop yields and increase soil fertility. Changes in sowing date can strongly affect plants development .Sowing dates can be manipulated to avoid the periods of greatest risk from pests, weeds, and diseases and hence increase yield of the crop. Agriculture and climate change are interrelated to each other, and the global climate is changing more rapidly than ever before. Water limitation is a major constraint in global crop growth, development, and production, and climate change is the leading cause of it, thus worsening this situation extravagantly with adverse effects on agriculture in most regions of the world. This review looks at sweet corn research from 2014-2021.

Keywords: climate, growth, sweet corn, yield

Arable Land Trend Analysis and Implications for Major Cereal Crop Yields in Hungary

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Land use types and management practices are essential principal indicators for sustainable agricultural land management. There have been changes in land use types in Hungary which significantly affected different sectors. Changes in arable land area affect production of important crops such as cereals which play a significant role in Hungarian agricultural trade. In recent years, reports show a substantial fluctuation in cereal production. Currently, the prices of cereals increased due to the outbreak of the war in Ukraine.

Therefore, this study was conducted to i) analyse the trends of arable land and cereal yields between 1990 - 2021, ii) predict the change in arable land and cereal crop yields by year 2030. Arable land and crop yield data (1990 - 2021) was extracted from the Hungarian central statistical office. Yearly changes in arable land and cereal crop yields were explored using Mann–Kendall (MK) test and Sen's slope (SS) method. The implication of variability of arable land on wheat, maize, barley, rye and oats yields was assessed using correlation and linear regression analysis.

Results showed a significant decrease in arable land ($p < 0.0001$, -17.3 thousand ha). On the contrary, there was a significant positive increase in yield of wheat ($p = 0.003$, 48.4kgs/ha), maize ($p = 0.001$, 102.1kgs/ha), barley ($p = 0.000$, 69.2kgs/ha), rye ($p < 0.0001$, 43.7kgs/ha) except oats ($p = 0.09$, 13.7kgs/ha). Correlation analysis revealed a negative relationship between changes in arable land and cereal crop yields. The decrease in arable land resulted into an increase in the yield of cereal crops. A prediction by regression analysis showed that by year 2030, arable land will decrease to 4030.1 thousand hectares as well as the cereal crop yields; wheat (5323.6kgs/ha), barley (5403.5 kgs/ha), and oats (2795.8 kgs/ha). However, only the yield of maize (7945.5 kgs/ha) and rye (3348.2kgs/ha) will increase by year 2030. The results of this study have implications for several stakeholders involved in planning and implementation of agriculture policies in Hungary.

Keywords: arable land, cereal crops, yield

A review of Fall armyworm (*Spodoptera frugiperda*) management strategies in maize production

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Maize (*Zea mays* L.) is among the most important staple food crops owing to its nutritional and economic benefits. However, its threatened by Fall armyworm (*Spodoptera frugiperda* J.E. Smith) which is one of the most polyphagous and invasive pests. Reports show that Fall armyworm has caused enormous yield and economic losses globally. The yield loss caused by this pest depends on variety susceptibility, farming system, severity of attack, and management practices. Yet, the farming systems and management tactics to avert its damage varies among different countries.

This review was conducted to show the current research advances in Fall armyworm management in maize production at a global perspective. Detailed search of literature was conducted in Web of Science. Literature synthesis shows that management approaches were biological control, use of transgenic crops and pesticides. The current significant methods used in year 2022 included use of biopesticides such as *Bacillus thuringiensis*, and parasitoids. In conclusion, this review shows that strategies which are economically and ecologically sound are being used to manage Fall armyworm.

Keywords: maize, management, biological control, invasion, cultural control

Trend Analysis of Livestock Products in Hungary

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Livestock sector in Hungary contributes significantly towards food security. By 2018, animal products were estimated at 1.9 billion litres of milk and 2.5 billion eggs. However, scanty literature available shows no critical and robust analysis of the livestock production trends in Hungary.

The purpose of this present study was to analyse and predict the quantities of livestock products for a series of time in Hungary, detecting potential trends and making future predictions. Data was extracted from Hungarian central statistical office between 2000-2020. The trends were analysed using Mann- Kendall and Sen's Slope and future predictions were conducted using regression analysis.

Results showed a negative significant decrease in sheep milk ($p = 0.00$, - 0.09 million litres), goat milk ($p = 0.00$, - 0.11 million litres) and hen eggs ($p = 0.00$, -46.56 million pcs) production except cow's milk ($p = 0.49$, -5.52 million litres). Regression analysis reveals that by 2040, animal products will continue to decrease; Cow's milk (1687 million litres), sheep's milk production (-1.0 million litres), goat's milk production (-3.97 million litres) and hen egg production (1334.3 million pcs). This shows that mechanisms to reverse this trend are needed to avert potential economic and nutrition effects on human livelihood.

Keywords: animals, livestock products, nutrition

Physiomorphology responses of spring oat varieties in Silicon and Sulphur application to alleviate drought stress

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Oats are an important crop produced on a global scale as human food and animal feed. The demand for oat grain for human consumption has gradually increased due to the dietary nutritional benefits. Its grain is well known as a rich source of dietary fiber, soluble fiber β -glucan, antioxidants, minerals and vitamins. Oats are versatile crop that can be cultivated under extreme environmental circumstances including cool wet climates and arid areas. Sulphur and Silicon foliar application are considered a beneficial elements to enhance oats tolerance to drought stress.

The aim of this study were to determine the effect of S and Si in oats by measuring LAI, SPAD,NDVI and plant height parameters at the different oat stages in eight spring oat varieties under drought conditions. LAI was measured with LAI-2000 Plant Canopy Analyzer, SPAD with a SpadMeter and NDVI with a GreenSeeker. According to the statistical evaluation, LAI values varied between (1.84-7.71), NDVI (0.25-0.87), SPAD (0.9-71.2) and for the plant height values varied (0.45m to 1.10m). The positive effect of sulphur and silicon on physiomorphology confirms the importance to include these nutrients in the cultivation technique of some spring oats varieties under drought circumstances.

Keywords: silicon, sulphur, oats

Szilícium és kén állománykezelés hatása az őszi zab genotípusok levélterületére és produktivitására eltérő évjáratokban

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A globális felmelegedés generálta klímaváltozás okán egyre gyakoribbá válnak egyes időjárási anomáliák, melyek a szántóföldi növények biomassza-, valamint termésnövekedését okozhatják. A zab (*Avena sativa* L.) fontos emberi táplálékként és állati takarmányként világszerte termesztett növény. Kutatási eredmények igazolták, hogy a szilíciumnak és a kénnek számos jótékony hatása ismert a növények növekedésére, fejlődésére és termésére, valamint enyhítik a különböző abiotikus stressz hatások (pl. a szárazság) negatív hatásait (Kovács et al, 2022).

Kutatásaink során a szilícium és kén kezeléseket vizsgáltuk az őszi zab genotípusok levélterületére és termésére. További célként tűztük ki a hazánkban nemesített őszi zab genotípusok vizsgálatát a Hajdúságban, és az adott agroökológiai feltételek mellett biztonságosan termesztendő fajták meghatározását.

A két vizsgálati évben a kisparcellás kísérlet a Debreceni Egyetem Böszörményi úti Campusán, csernozjom talajon valósult meg. A kutatás során 5 őszi zab fajtát vizsgáltunk 4 kezelés mellett (kontroll, Si, S, Si+S), 3 ismétlésben. A szilíciumos kezeléseket során a Prosilicon, a kénes kezeléseket a Jello Fluid nevű készítményeket juttattuk ki lombtrágya formájában. A kezeléseket 3 fenofázisban végeztük el.

Az első évben a 3 mérés összesített átlaga alapján az Mv Imperiál fajtánál mértük a legnagyobb levélterület index értékeket. A kezeléseket szempontjából statisztikailag igazolhatóan magasabb eredményeket mértünk a kezelt területekhez képest. A második év során a legmagasabb értékeket a GK Arany fajtánál mértük, a kezeléseket pedig a mérések többségében szignifikánsan magasabb értéket eredményezett a kombinált (Si+S) kezelés.

A vizsgált genotípusok közül mindkét évben a GK Arany, Mv Istráng és az Mv Hópehely fajták érték el a legmagasabb termést. 2021-ben mindhárom kezelés hatására szignifikánsan magasabb termésátlagokat kaptunk a kontrollhoz képest, míg 2022-ben a kombinált kezelést kapott parcellák szignifikánsan magasabb terméshozammal rendelkeztek.

Két év eredményei alapján megállapíthatjuk, hogy a kombinált kezelés statisztikailag igazolhatóan pozitív hatással volt a termésátlagokra. A fajták közül mindkét évben a Mv Hópehely, GK Arany terméshozama bizonyult a legkedvezőbbnek.

Irodalomjegyzék:

Kovács, S.; Kutasy, E.; Csajbók, J. The Multiple Role of Silicon Nutrition in Alleviating Environmental Stresses in Sustainable Crop Production. *Plants* 2022, 11, 1223.

Kulcsszavak: őszi zab, szilícium, kén, LAI, termés

Évjárat hatása a kukorica hibridek alkalmazkodóképességére**Virág István Csaba¹, Dr. Vad Attila Miklós², Dr. Kutasy Erika Tünde³**¹Debreceni Egyetem, Mezőgazdaság-, Élelmiszertudományi és Környezetgazdálkodási Kar, Növénytudományi Intézet, Növénytermesztéstani, Tájökológiai és Növénynevelési Tanszék²Debreceni Egyetem, Agrár Kutatóintézetek és Tangazdaság, Debreceni Tangazdaság és Tájkutató Intézet (DTTI), Látóképi Növénytermesztési Kísérleti Telep³Debreceni Egyetem, Mezőgazdaság-, Élelmiszertudományi és Környezetgazdálkodási Kar, Növénytudományi Intézet, Növénytermesztéstani, Tájökológiai és Növénynevelési TanszékElső szerző/ előadó e-mail címe: virag.istvan.csaba@agr.unideb.hu

A kutatásomban a kukorica tőszámreakcióját és produktivitását vizsgáltam eltérő évjáratokban. A különböző agrotechnikai körülményekre és időjárási viszonyokra a hibridek eltérően reagálnak. Pepó és Csajbók (2014) megállapították, hogy az agrotechnikai elemek közül az állománysűrűség 7%-kal befolyásolta a termés mennyiségét. A jó tápanyagellátottság mellett a megfelelő vízellátottság is feltétele a tenyészterület csökkentésének (Jakab et al, 2005). A kísérletemben hasonló tenyészidejű kukorica hibrideket (Kamária, KWS Kamparis, P9903, DKC4351) vizsgáltam a Debreceni Egyetem Látóképi kísérleti telepén 2020-ban és 2021-ben. Az eltérő állománysűrűségtől (65-75-85-95 ezer tő/ha) eltekintve egységes agrotechnikát alkalmaztam.

Eredmények: A tőszám termésre gyakorolt hatását vizsgálva a hibridek átlagában megállapítottam, hogy 2020-ban a termés mind a négy tőszámon magasabb volt, mint 2021-ben. Mindkét évjáratban a legalacsonyabb termést 65000 tő ha⁻¹ (2020: 9,95 t ha⁻¹, 2021: 8,38 t ha⁻¹), míg a legmagasabb termést 95000 tő ha⁻¹ (2020: 8,78 t ha⁻¹, 2021: 10,38 t ha⁻¹) állománysűrűségnél mértük. A genotípusokat összehasonlítva, mind a két évben a P9903 hozta a legmagasabb termést (2020: 10,89 t ha⁻¹, 2021: 9,31 t ha⁻¹). A DKC4351 2020-ban 10,07 t ha⁻¹, 2021-ben pedig 9,00 t ha⁻¹ hozamot ért el, ami a vizsgált hibridek közt a legalacsonyabb termésingadozásnak bizonyult. Az állománysűrítés hatását vizsgálva az egyes genotípusok produktivitására megállapítható, hogy 2020-ban a termés a tőszám növelésével közel lineárisan emelkedett, a maximális termést a 95000 tőszámon érték el, de 85000 felett a növekedés már nem volt szignifikáns. 2021-ben a Kamária és a P9903 a tőszámok növelésével 65-85000 tőszám közt termésnövekedést, majd 95 ezres tőszámnál ismét termésnövekedést mutatott. A DKC4351 esetében a 95 ezres tőszám már termésdepressziót eredményezett. A Kamparis hibrid termése lineárisan nőtt a vizsgált tőszámokon. A két év adatai alapján a vizsgált hibridek esetében a 75000 tőszám bizonyult optimálisnak.

Irodalomjegyzék:

Jakab, P. ; Futó, Z.; Csajbók, J.: Analyze of photosynthesis and productivity of maize hybrids in different fertilizer treatments Cereal Research Communications 33 : 1 pp. 205-207. , 3 p. (2005)

Pepó, P.; Csajbók, J. (2014): Agrotechnikai tényezők szerepe a kukorica (*Zea mays* L.) termesztésben Növénytermelés 63 : 2 pp. 45-68. , 24 p.”

Kulcsszavak: Zea mays L., genotípus, tőszámsűrítettség, termőképesség, évjárat

ALKOTMÁNYJOG

CONSTITUTIONAL LAW



A MEDIÁCIÓ ALKOTMÁNYOS ALAPJAI A MAGYAR ALAPTÖRVÉNYBEN

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Jelen tanulmány célja, hogy bemutassa a mediáció alkotmányos megalapozottságát és felhívja a figyelmet arra, hogy a magyar Alaptörvény mely pontjai utalhatnak az alternatív vitarendezésre. Nagyon fontos, hogy a mediáció, a viták vagy vitás jogi helyzetek békés megoldására való törekvés egy összetársadalmi érdek, amelynek áttételesen létezik alkotmányos megalapozottsága. A tanulmány erre keresi a választ.

Kulcsszavak: mediáció, alternatív vitarendezés, jogállamiság, rule of law, alaptörvény, jog

Fogvatartottak egészségügyi ellátásnak alapjogi kérdései

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A büntetés-végrehajtási intézetbe történő befogadással az egyén jogi státusza megváltozik, egy sajátos jogviszony, ún. büntetés-végrehajtási jogviszony keletkezik. Ebben a jogviszonyban a feleket sajátos jogok és kötelezettségek illetik meg, az Alaptörvényben rögzített alapvető jogok közül van olyan, amely módosul, részben változik vagy éppen szünetel. Sajátosan alakul többek közt a fogvatartottak egészséghez való joga. Magyarország alapvető jogként ismeri el az egészséghez való jogot, az Alaptörvény XX. cikk (1) bekezdése alapján „Mindenkinek joga van a testi és lelki egészséghez.” Kutatásom célja annak vizsgálata, hogy az egészséghez való jog a fogvatartottak esetében, a büntetés-végrehajtási intézetekben hogyan érvényesül. Az egészséghez való joghoz kapcsolódó betegjogokat és kötelezettségeket az egészségügyről szóló 1997. évi CLIV. törvény tartalmazza. A vizsgálat során ezen jogok és kötelezettségek gyakorlati megvalósulásának elemzése mentén történik a betegjogok érvényesülésének elemzése.

Kulcsszavak: alapjog, egészségügy, büntetés-végrehajtás, betegjogok, fogvatartott

A magyar parlamenti fegyelmi jog dogmatikai elemzése

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A kutatás a magyar parlamenti fegyelmi jog dogmatikai elemzését tűzte ki célul, amely keretében – a terjedelmi korlátokra figyelemmel – tömören, de részletesen mutatja be a hazai szabályozást.

A kutatás központjában a parlamenti fegyelmi jog dogmatikai kérdései, problémái állnak, azaz azok országgyűlési képviselőkre vonatkozó magatartási szabályok, szankciók, amelyek a parlamenti funkciók eredményes (zökkenőmentes, színvonalas és méltóságteljes) ellátását igyekeznek biztosítani a plenáris és bizottsági üléseken. A problémakör megköveteli a magyar Alaptörvény, valamint a hazai jogforrások értelmezését és elemzését az ismert értelmezési technikák (elsősorban a nyelvtani, a joglogikai, valamint a jogszabály, illetve a jogalkotó akarata/szándéka szerinti értelmezés) segítségével. Ezt egészíti ki a rendelkezésre álló magyar, továbbá nemzetközi szakirodalom és gyakorlat feltérképezése, illetve szintetizálása,

Tekintettel arra, hogy dogmatikai jellegű, a kutatás a következő kérdésekre fókuszál: mi sorolható parlamenti fegyelmi jog fogalmának körébe és mi nem, milyen fogalmi megoldások vannak, továbbá hogyan viszonyul a szabálysértési joghoz, illetve a büntetőjoghoz. E körben a kapott fogalom alapján tisztázza, melyek a fegyelmi jog dogmatikai elemei (alanya, érintettség, mire irányul, mi alapozza meg stb.). Ezen felül részletesen ismerteti a magyar parlamenti fegyelmi jog célját (viszonya a mentelmi joghoz, alapjogi vonatkozások, ellenzéki jogok érvényesülése szempontjából), valamint eszközrendszerét (mikor és mire, fokozatosság, szigorúság stb.).

Kulcsszavak: parlamenti fegyelmi jog, obstrukció, országgyűlési ülések

A magyarországi bírósági igazgatás retrospektív vizsgálata

dr. Fekete Kristóf Benedek¹

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A kutatás a magyarországi bírósági igazgatás retrospektív vizsgálatát, elemzését tűzte ki célul, azonban – a terjedelmi korlátokra figyelemmel – nem szándéka a szabályozás minden aspektusára kiterjedő részletességű ismertetése.

A kutatás fókuszában a bírósági szervezet bemutatását követően a centrális és lokális bírósági igazgatás állapota áll, amely tárgyalására négy nagy egységben, korszakra bontva kerül sor. A téma kifejtése megköveteli a vizsgált időszakok sajátosságainak bemutatását, jogi-politikai háttérének feltárását, amelynek érdekében szükséges elvégezni a vizsgálandó tárgyát adó kérdésben a releváns jogforrások értelmezését és elemzését az ismert értelmezési technikák (elsősorban a nyelvtani, a joglogikai, valamint a jogszabály, illetve a jogalkotó akarata/szándéka szerinti értelmezés) segítségével. Ezt egészíti ki a rendelkezésre álló magyar szakirodalom és gyakorlat feltérképezése, illetve szintetizálása, amelyet helyenként nemzetközi példa is erősít.

A kutatás arra a megállapításra jut, hogy a bírósági igazgatás mindig az adott kor, korszak hatékonysági és törvényességi (ezen belül a bírói függetlenség) összeegyeztethetőségének problematikáját vetette, és veti fel még ma is, amelyből a bíróságok igazgatásának elvi kérdései is fakadnak. Valamennyi áttekintett időszak esetben a fő kérdést az jelentette, hogy a bíróságok igazgatását miként lehet akként kialakítani, hogy a lehető legkisebb mértékben válják lehetővé a külső (tipikusan: politikai irányából történő) befolyás gyakorlása, legalábbis elvi értelemben.

A kutatás eredményeképpen megállapítható, hogy a vizsgált időszakokban a bírósági igazgatás mindig tükrözte – hol nyíltan, hol kevésbé nyíltan – az adott állami-politikai berendezkedést, viselte annak jellegzetes ismertetőjegyeit. Ebből folyóan arra a fő kérdésre, hogy vajon a „megfelelő” irányba fejlődött-e látni szükséges az adott korszak gazdasági-politikai-történeti stb. háttérét. Ilyen téren mondhatjuk, hogy minden periódusban „megfelelő” volt a bíróságok igazgatása. Ha viszont absztraháljuk a kérdést, akkor álláspontom szerint annál jobb egy adott állam bírósági igazgatása, minél távolabb áll a politika „hálójától”, vagyis minél inkább a bírósági szervezetrendszeren belül marad az igazgatási problémák megoldása.

Kulcsszavak: bírósági igazgatás, bírói függetlenség, igazságszolgáltatási szervezetrendszer

BŰNÜGYI ÉS INFOKOMMUNIKÁCIÓS JOG
CRIMINAL SCIENCES AND
INFOCOMMUNICATION LAW

A gyermekvédelmi szakellátás során tapasztalt kortársbántalmazás vizsgálata

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Tervezett előadásomban a László János Doktorandusz Ösztöndíj keretében megvalósult kutatás tapasztalatait mutatom be. A gyermekotthonokban markánsan jelen lévő kortársbántalmazás, valamint ennek online formája kihívás elé állítja a jogalkalmazót. Bár a gyermekjogok védelme kiemelt jogpolitikai célkitűzés nemzetközi és hazai színterén is, kérdéses azonban, hogy a gyakorlatban milyen mértékben teremthető meg a biztonságos környezet a családból kiemelt fiatalok számára, illetve fontosnak tartom a gyermekvédelemben dolgozó szakemberek kortársbántalmazással kapcsolatos attitűdjének vizsgálatát.

Kulcsszavak: Gyermekvédelem, bullying, cyberbullying

A nyugdíjfolyósító elektronikus információs rendszerek kiberbiztonsági kihívásai

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A gazdasági és társadalmi élet egyik legfontosabb értéke az információ. Az információ a szervezetek számára erőforrás, hatékony működés alapja, szervezet vagyona és gyakran termék, áru is. A kiberbiztonság ritkán merül fel bennünk, mint probléma, pedig valójában mindennapjainkat behálózza az információk védelmében tett tevékenységek sorozata. Vannak folyamatok, amelyek kritikus helyzetbe hozhatják a szervezetet működését probléma esetén, ha nem megfelelően szabályozzák a szervezet működését, és hatékonyan nem készül fel a szervezet egy esetleges katasztrófa elhárítására.

Komplex informatikai biztonsági rendszer tervezésének ma már elengedhetetlen feltétele a kockázat alapú korszerű tervezési módszerek ismerete és alkalmazása. Mint a tanulmányból kiderül, nagyon sok szempontot kell figyelembe venni, hogy ezt a típusú munkát siker koronázza. A tervezés minden esetben meglehetősen intézmény specifikus, az adott intézmény szerkezetét, adottságait messzemenően figyelembe kell venni.

E tanulmány az információbiztonsági irányítási rendszer elméleti tervezési folyamatának háttérét és gyakorlatát foglalja össze és egy esettanulmányon keresztül példát mutat egy lehetséges megvalósításra.

Kulcsszavak: kiberbiztonság, pedagógiai kiberbiztonsági keretrendszer, információbiztonság irányítási rendszer (IBIR), GRC rendszerek, fenyegetettségek és kockázatok

Az arcfelismerő technológia rendszerek bűnüldözési célú alkalmazásának egyes elméleti és gyakorlati kérdései

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Az Európai Adatvédelmi Testület 2022. május 12-én az arcfelismerő technológia bűnüldözési területen való alkalmazásáról szóló új iránymutatást (EDPB Guidelines 05/2022) fogadott el. A dokumentum iránymutatást nyújt az uniós és a nemzeti jogalkotók, valamint a bűnüldöző hatóságok számára az arcfelismerő technológiai rendszerek megvalósításához és használatához. Egyre több bűnüldöző hatóság alkalmaz vagy szándékozik alkalmazni az arcfelismerő technológia rendszereket, többek között az érintett személyek hitelesítése vagy azonosítása érdekében. Az arcfelismerő technológia rendszerek ugyanakkor a biometrikus adatok kategóriájába tartozó személyes adatok kezelése által jelentős kockázatot hordoznak a természetes személyek jogaira és szabadságaira nézve.

E rendszerek ugyan nélkülözhetetlen előnyöket kínálnak a bűnüldöző hatóságok számára, a szükségesség és az arányosság követelményeinek történő megfelelés – amely a magánszektorhoz képest számos esetben szélesebb keretek között mozog – esetükben is elengedhetetlen követelmény.

Ugyanakkor ezen hatóságok tagállamonként eltérő mérlegelési jogkörrel és szuverén hatáskörrel rendelkeznek.

Az Európai Adatvédelmi Testület álláspontja szerint az arcfelismerő technológia rendszerek használata csak a bűnüldözésben érvényesítendő adatvédelemről szóló irányelvben meghatározottak, valamint az Alapjogi Chartában külön is nevesített szükségesség és arányosság követelményével összhangban alkalmazhatók.

Az irányelv hatályát átlépve ugyanakkor az arcfelismerő technológiák számos célt szolgálhatnak, ideértve a különösen a közbiztonsági és kereskedelmi szempontokat.

Tanulmányomban arra keresem a választ, hogy milyen módon lehetséges az arcfelismerő technológia rendszerek fenti követelményekkel összhangban történő alkalmazása, különös tekintettel a bűnüldözési célból történő adatkezelések esetében.

Kulcsszavak: adatvédelem, hatósági gyakorlat, FRT, LED

Virtual pandemonium

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Inefficient, confused movement due to lack of control. A state where random effects occur without any direction, order or planning. Lots and rapid activity, movement - without benefit or result.

The meaning of pandemonium, in the real world can be expressed in this way. However, if we think of meaning of pandemonium in the virtual world, the phrase could be the same but more over it often leads to profit or to a result that is also criminal. I would like to draw attention and illustrate these cases.

Keywords: Virtual, pandemonium, web, crime, anonymity

The copyright aspects of NFTs

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The renaissance of crypto began in 2018 with the release of the ERC-721 technical standard, which allows the creation of non-fungible tokens (NFT).

The reason for the creation of NFTs can be mainly found in the problems in the art and design sector, such as proper pricing of works, guaranteeing fair use and preventing the distribution of counterfeits. However, the emergence and practical use of NFTs is a more wider category. In fact, in the early days of the NFT era, the market was dominated by NFTs in the form of different images. But nowadays, for example, NFTs are appearing in play-to-earn blockchain games, and NFT music tracks are also spreading, which could fundamentally change the present royalty system and the way music tracks are distributed and promoted in the music sector.

In the near future, the trend towards NFT is expected to rise, which may lead to an increasing number of objects appearing in the metaverse, for example, the purchase of a property in the metaverse will challenge the legislation.

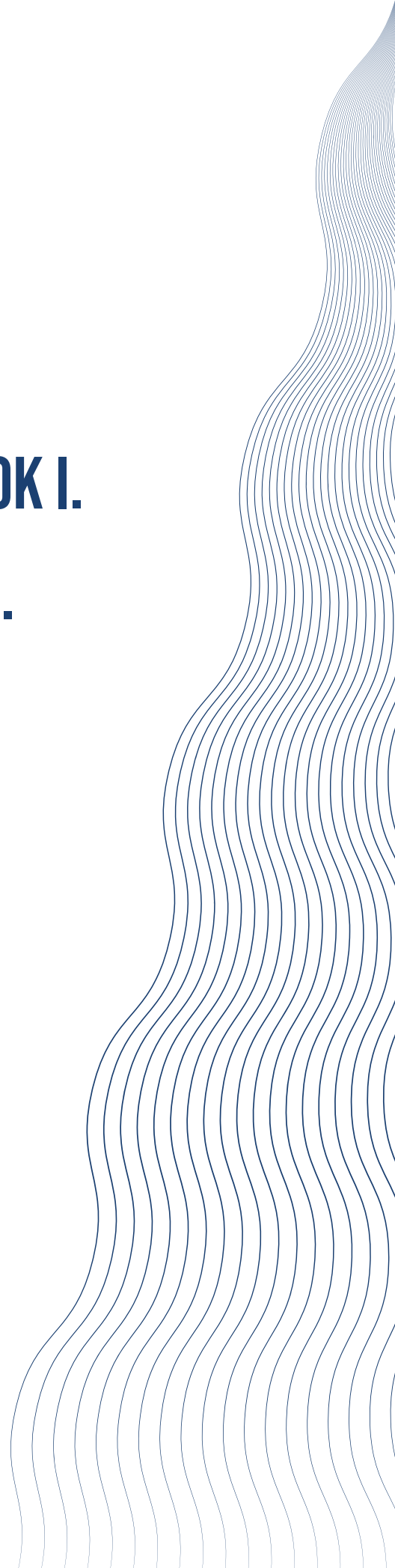
At present, trading and auctions of NFTs also present challenges of interpretation and application of the law. Consider that, when NFTs are sold natively or on the secondary market, the position of the owner and the copyright holder of the NFT needs to be clarified, given the apparent conflict between the two different subject positions. Indeed, as in the case of traditional offline artworks, there is a separation between the owner of the work and the copyright holder in relation to NFTs.

For the reason mentioned as an example, the present study is limited to the examination of the question of copyright of non-fungible tokens (NFTs), focusing primarily on national legislation. Secondly, taking into consideration the guiding provisions of continental copyright law in the EU and US Anglo-Saxon copyrights law regarding NFTs.

Keywords: NFT, metaverse, crypto, copyrigh

EGÉSZSÉGTUDOMÁNYOK I.

HEALTH SCIENCES I.



Aviation safety aspects of Covid-19 infection

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Covid-19 pandemic had a significant effect on every aspects of our lives, well known impact on air traffic as well, however not many considerations of its effect on aviation safety yet.

The aim of this research is to identify the effects of covid-19 infection- and post covid syndrome in particular- on aviation personnel and mitigate the risk that it may cause in aviation safety.

Since the breakout of this pandemic more and more information was published on long term side effects of the infection. Many of the most common complications, such as chronic fatigue, brain fog, memory failures, decreased concentration and increased reaction times had been reported for long periods after the sickness. These complains are strongly effecting the human performance in the demanding environment of aviation- posing an increased risk of human error occurrence not just in pilots, but as well among the air traffic controllers, flight attendants and ground engineering services. Mistakes due to post covid symptoms in any of this population may lead to catastrophic accidents in flying- risking hundreds of lives. One of the highlighted performance-deteriorating aviation risk in post-covid symptom is chronic fatigue- a well-known human error factor for which all aviation safety agencies are recommending a fatigue management system, but yet not much practical tools to objectively measure fatigue.

The author can utilize the opportunity of accessing data of regular medical screenings of aviation personnel, study the objective performance before and after covid infection in this population and use questionnaires to collect subjective data on post covid symptoms among them. Furthermore can conduct research both in hypobaric chamber flight simulations and during real time flights in the future to develop a biosensor technology to objectively monitor human performance in terms of alertness and fatigue.

Analyzing the data of physical performance of 47 divers and parachutes with an average of 66,91 days after the covid-19 infection had shown a significantly higher pulse reaction in patients who reported fatigue as symptom- suggesting a worse physical condition and correlation between subjective and objective effects of fatigue on performance even 2 months after covid-19.

From these preliminary results we can suggest, that further research and study in this topic may lead to solutions for mitigating the risks of covid-19 infection in aviation.

Keywords: aviation safety, Covid-19, post-covid syndrome, long-covid syndrome, fatigue management

Characteristics of Homebirth in Hungary: A Retrospective Cohort Study

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Background: Homebirth is legal and regulated by law in Hungary since 2012. Despite apparent preferences for homebirth, it has not yet been broadly accepted due to various opinions related to the safety and risks associated with giving birth outside of a hospital. Our study aimed to explore real maternal and foeto-neonatal characteristics associated with Hungarian home births compared with institutional births.

Methods: A total of 2,997 cases were considered in support of our comparative retrospective cohort study. Data regarding home birth cases (n=1792) was sourced from Hungarian Tauffer databases (2012-2020) and compared with its matched institutional birth data (n=1205) obtained from university-linked obstetrical departments. Both descriptive and inferential statistics were conducted.

Results: In the examined period, there was a significant, continual incremental rise in the number of home births from 0.04 (2012) to 0.48% (2020) in Hungary, which represent an average of 0.22% per year (95% CI, 0.02-0.25). The maternal age was 33.16±4.71 and 29.69±5.44 years for home births and institutionalized births, respectively (p<.001). Women who chose homebirth were multiparous and the majority experienced a spontaneous mode of childbirth compared with mothers who gave birth at a healthcare institution (p<.001). Some pathologies (primary uterine inertia, prolonged second-stage labour and third-stage haemorrhage) were prevalent among homebirth cases (1.29% vs 0.72%, p<.05); and associated with a cc. 12% rate of transfer to a health care institution. But the overall intervention rate was lower among homebirth (0.11% vs 42.57%) compared to institutional birth cases (p<.001). A slightly better Apgar score and relatively high rate (20%) of Caesarean deliveries were correlated with institutionalized births (p<.05). But the overall intervention rate was lower among homebirth (0.11% vs 42.57%) compared to institutional birth cases (p<0.001).

Conclusions: The finding of our study demonstrates that home birth is a reliable option for healthy, and low-risk mothers with uncomplicated pregnancies, which is reflected in the increasing number of deliveries at home in Hungary. Furthermore, utilizing the experiences of countries where home birth is a long-established method may further improve the outcome of homebirths in Hungary.

Keywords: home childbirth; institutional childbirth; pregnancy complications; pregnancy outcome

Egy megyei kórház intenzív osztályain dolgozó ápolók ismerete a centrális vénás katéterrel összefüggő fertőzések evidenciákon alapuló megelőzéséről

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Bevezetés: A centrális vénás katéter (CVC) szúrására, és gondozására vonatkozó infekciókontroll óvintézkedések betartása mellett a fertőzések jelentős része megelőzhető. Sajnos az ajánlások be nem tartása gyakori jelenség, ennek egyik oka lehet a nem megfelelő ismeret. A vizsgálat célja felmérni az intenzív osztályon dolgozó ápolók ismeretét a CVC okozta fertőzések megelőzéséről.

Vizsgálati anyag és módszer: Kvantitatív, keresztmetszeti vizsgálatot végeztünk 2019. június 3. és október 31. között célirányos nem véletlenszerű mintavételi módszerrel kiválasztott egy megyei kórház intenzív osztályain dolgozó ápolók körében (n=60). Az adatgyűjtés eszköze validált többszörös választásos kérdőív. A kérdőív válaszai mellett munkahelyre jellemző adatokat gyűjtöttünk: intenzív osztályos gyakorlati év, ágyszám, heti munkaóra, munkarend, oktatás. A leíró statisztikai elemzés mellett χ^2 -próbát, ANOVA-t, kétmintás t-próbát, lineáris regressziót alkalmaztunk (p<0,05) SPSS szoftver alkalmazásával.

Eredmények: A 11 kérdésre adott helyes válaszok átlaga 44,6% volt. A válaszadók közül csak kevesen (21,7%) tudták a CVC okozta véráramfertőzés kockázati tényezőit, a többség (81,7%) viszont helyesen választotta, hogy zsíroldatok adásakor 24 óránként kell cserélni az infúziós szerelékét. A 6 évnél hosszabb intenzív osztályos gyakorlattal rendelkezők szignifikánsan többen tudták a helyes válaszokat a CVC okozta fertőzések prevenciós lehetőségeiről, mint az 5 vagy annál kevesebb éve dolgozó ápolók (p=0,037). Az oktatáson részt vettek szignifikánsan többen meg tudták határozni a helyes válaszokat, mint akik nem részesültek oktatáson (p=0,006). A módszertani levelet olvasó csoportnak szignifikánsan jobb a tudás szintjük, mint a módszertani levelet nem ismerő csoportnak (p<0,001).

Következtetés: Vizsgálatunk alapján, az intenzív osztályon dolgozó ápolók ismerete a CVC okozta fertőzések megelőzéséről nem megfelelő. Az ajánlások folyamatos oktatása az ápolók ismereteit bővítené.

Kulcsszavak: ápolók, centrális vénás katéter, ismeret, véráramfertőzés

Antenatal laboratory profile of pastoralist expectant mothers in Moyale Sub County, Kenya: A descriptive analysis

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Introduction: An antenatal clinic is where pregnant mothers are required to seek the service at least four times from early pregnancy to term. It is a very important component of maternity care to ensure a healthy pregnancy and safer childbirth. To provide adequate antenatal care, a laboratory profile needs to be conducted for all pregnant mothers. Challenges remain in bringing and accessing such services to the pastoralist communities in Kenya.

Aim: To explore the antenatal profile of pastoralist expectant mothers in Marsabit County, Kenya to understand the laboratory profile through descriptive analysis.

Methods: A retrospective review of laboratory antenatal clinic records of all women who attended integrated maternal mobile clinic outreach in Moyale Sub-County between September 2019 and September 2020 was conducted. Data were entered into Microsoft Excel transferred to SPSS 27.0 the mean was calculated for continuous variables, frequency and proportions for categorical variables and associative statistics were calculated.

Results: A total of 357 respondents were processed with a mean age of 25.56 ± 5.6 years. Of which 311 (87%) were illiterate and 100 (28%) were from Yaballo Godha village. About 64% of participants were multigravida. On the sample processed and tested positive, 6% was malaria parasite, 5% HBsAg, 1% syphilis, 5% with urine infection and 11% showed intestinal infection. The majority of expectant mothers were blood group 0+ve (42.6%) with 64.7% showing moderate and 12.3% severe anaemia. A total of 19 (5.3%) of the mothers had gestational diabetes. One co-infection result was noted between syphilis and HBsAg. (44.7%). X² showed that hemoglobin status of the respondents was dependent on their residence ($X^2 = 51.423$, $p < 0.001$) but not age ($X^2 = 5.341$, $p = 0.501$). The Pearson correlation coefficient result showed that the number of pregnancies of the respondents increased linearly with age ($p < 0.001$). However, a weak inverse relationship was noted between blood sugar level and age ($p = 0.04$).

Conclusions: Antenatal laboratory profiling can assist in capturing early diagnosis of preventable conditions that can affect birth outcomes. The variations in the geographical location of the respondents should further be studied to find the prevailing factors explaining differential haemoglobin status to inform required intervention.

Keywords: Laboratory profiling, Antenatal clinic, Early diagnosis, Pastoralist

The effect of healthcare secondments on the mental health of students at the faculties of medicine and health sciences

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Introduction: The coronavirus pandemic is a public health emergency of international concern, which has been unprecedented in modern history. The aim of our research was to assess how the provision of healthcare services on secondment affected students at the Faculty of Medicine and Health Sciences in terms of burnout and depression rates.

Material and method: Applying a targeted and non-random sampling, we conducted a longitudinal investigation during our assessment. Our questionnaire was available for the intervals of May-July 2021 and September-November 2021. Burnout was determined based on the Maslach Burnout Inventory Student Scale (MBI-SS), whereas for depression, we used the Beck Depression Inventory, a validated questionnaire consisting of 13 questions. We utilised descriptive statistics and paired t-test self-reporting survey ($p < 0.05$) to analyse the data.

Results: We analysed the results acquired from 183 students, out of which 127 persons were assigned to provide healthcare services on secondment. 67.4% (127 persons) of the students included in the sampling were worried about their health. Concerning the students at the Medical School, their rate assessed on the subscale of exhaustion and cynicism decreased significantly during secondment ($p \leq 0.05$). The exhaustion rate of the students of the Faculty of Health Sciences decreased ($p \leq 0.05$), while their efficacy rate improved ($p \leq 0.05$). The rate of depression showed a significant decrease in both faculties' students ($p \leq 0.05$). The exhaustion rate of nurses, physiotherapists, radiographers and medical students decreased significantly ($p \leq 0.05$). The rate of depression decreased to a significant extent exclusively in the case of paramedic, physiotherapy and laboratory analytics students ($p \leq 0.05$). Secondment carried out at hospitals, or at hospitals and national ambulance services as well, had a positive effect on all three dimensions of burnout and on the extent of the depression observed ($p \leq 0.05$). Based on the subjective opinions of the students, from the perspective of society, only the role of doctors became significantly more prominent and respected during the period under review ($t = 3.493$; $p = 0.001$).

Conclusion: Although they may not have been significant in all cases, the rates of burnout and depression – assessed in the same students – showed a decreasing tendency during the two periods under review.

Keywords: students, COVID-19, pandemic

Diádikus és triádikus konverzációelemzés elhízott gyermekek gondozása közben 10 rögzített felvétel segítségével

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A gyermekkori elhízás egy a világon mindenütt folyamatosan jelenlevő probléma. Az elhízás hazánkban is jelen van, a gyermekek negyede szenved elhízástól. Az elhízás potenciális társbetegségeivel együtt orvosi segítséget kezelést és diagnózist igényel. Az orvosi kezelés során a kommunikáció elengedhetetlen a megfelelő együttműködés kialakításához az orvos a gyerek és a szülő között. A kutatásom célcsoportja a Pécsi Tudományegyetem Klinikai Központ Gyermekgyógyászati Klinikáján mintegy 500, túlsúly miatt gondozott gyermekből és gondviselőikből áll. Az orvosi rendelőben történt beszélgetéseket a Folker 2.1 transzkripció program segítségével elemeztem. Az előadásban 4 (2 diádikus és 2 triádikus) beszélgetést kívánok elemezni. Az elemzés célja annak leírása, hogy a résztvevők a terápia döntésekhez milyen mértékben járulnak hozzá.

Eredmények: A triádikus interakciókban résztvevők közül az orvos a többi szereplőnél legalább 20%-kal több megnyilatkozást tesz az interakciókban. Az interakciók során a gyermek mintegy 10%-ban járul hozzá a beszélgetéshez. A diádikus interakcióban, a szülő –ha egyáltalán jelen van- nagyon keveset beszél, az interakcióban a nagy gyermek dominál. Ez azonban nem mindig igaz, a gondozás transzkripciói során többször is kiderült, hogy a nagyobb gyermekek között is előfordul a kevesebb beszéd, így nagyrészt orvos-szülő párbeszédet hallhatunk. A hozzájárulások akár 50%-os arányban is történhetnek az orvos és a beteg részéről is.

Következtetés: Mivel a gyermek hozzájárulása az interakciók során csak kis mértékű, így az orvos feladata a gyermeket motiválni arra, hogy többet beszéljen a gondozás során.

Kulcsszavak: diádikus, triádikus, elhízás, konverzáció, interakció

Postoperative functional outcomes of total hip arthroplasty patients in public and private healthcare

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Objectives: The aim of our study was to investigate the postoperative functional outcomes of patients who underwent total hip arthroplasty in public and private healthcare during the hospital discharge period.

Methods: Patients were selected from the Department of Orthopedics, Clinical Centre of the University of Pécs and at the Da Vinci Private Clinic in Pécs, using a simple convenience sampling technique. They completed a questionnaire during hospital discharge, which included questions on functional outcomes (stairs after surgery, utilization of walking aid, difference in limb length).

Results: The research involved 208 people, 96 patients in the state and 112 in the private health care. There was a significant difference in the day of discharge from hospital, with public patients being discharged on the 6th day after surgery and private patients on the 2nd day ($p < 0.001$). 27.68% of private patients left the hospital without walking aids, while all public patients left with walking aids. Patients in private healthcare left with 1 elbow crutch in 53.57% of cases ($p < 0.001$) and patients in public healthcare left with 2 elbow crutches in 87.50% of cases ($p < 0.001$). There was also a significant difference in the day of stairs, with public health patients stairs on the 4th day after surgery and private patients stairs on the 1st day after surgery ($p < 0.001$). While patients in the public sector walked step by step, private patients walked with alternating feet ($p < 0.001$). The difference in limb length was significantly improved for both care sectors (public: from 1.18 cm to 0.26 cm, private: from 0.96 cm to 0.10 cm) ($p < 0.001$), and the difference in limb length was significantly lower for private patients after surgery ($p = 0.023$).

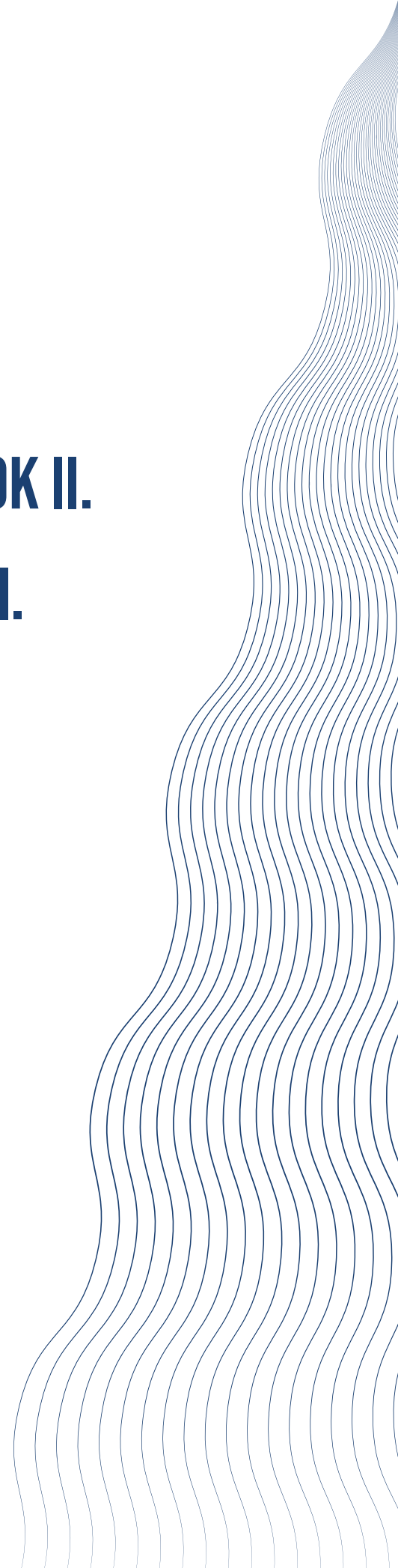
Conclusions: Patients in the two groups showed different outcomes in hospital discharge data, which may be related to the different surgical techniques used in the two sectors. Private patients were able to stair and leave the hospital earlier, and they also used a walking aid at a lower rate. Limb length differences were significantly improved for patients in both groups.

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Keywords: public and private health care, hip prosthesis, walking aid, limb length, stairs

EGÉSZSÉGTUDOMÁNYOK II.

HEALTH SCIENCES II.



Fatty acid composition of mono-component plant-based drinks

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Background: Plant-based drinks are in style nowadays, with increasing consumption worldwide for a variety of reasons, including vegetarian/vegan diets, healthy lifestyles or food intolerance (e.g. cow milk allergy, lactose intolerance). Fatty acids composition of these drinks contribute to their health effects.

Aim: The number of studies analyzing fatty acid profile of plant-based beverages is negligible, therefore our aim was to study the fatty acid composition of different mono-component plant-based drinks marketed across Europe.

Methods: The samples (n = 26) included unflavoured and/or unsweetened plant-based drinks that were produced from only one type of plant seed (coconut:7, almond:5, rice: 4, spelt:1, nut: 1, soybean:3, oat:3, and cashew:2). We determined the fatty acid methyl esters using gas chromatography with flame ionization detector between chain length of C6:0-C26:0.

Results: Our results showed that the fatty acid composition of most drinks made from the same plant was very similar, but there were substantial differences between the different drinks. For example, the main fatty acid in oat drinks was the essential n-6 linoleic acid (C18:2n-6, 48.30 ± 1.27 w/w%, mean \pm SD) while for cashew drinks was the monounsaturated oleic acid (C18:1n-9; 59.3 ± 0.56 w/w%). Furthermore, the essential n-3 alpha-linoleic acid (C18:3n-3) scored the highest value in the soybean drinks. On the other hand, the fatty acid composition of one rice drink was notably different from that of the other three rice drinks. In addition, the fatty acid profile of five coconut drinks was very different from that of pure coconut fat found in the literature (lower short and medium carbon saturated fatty acids, higher essential fatty acid content).

Conclusions: Our results show that there are big differences in fatty acid composition not only among plants but also among brands of the same plant type. These variations could be the result of the food additives that were indicated on some of the labels, such as lecithin and algae extract.

Keywords: fatty acid, plant-based drink, nutrition

Effectiveness of exercise interventions on fall prevention in non-diseased community-dwelling older adults

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Objective: To present the first systematic review of randomized controlled trials in order to summarize the efficacy of resistance, balance, and multi-component exercise interventions on the parameters of functional ability (e.g., lower extremities muscle strength, balance performance and mobility). **Methods:** Literature search was conducted in Cochrane, Embase, Ovid Medline, PEDro, Pubmed, Science Direct, Scopus and Web of science. We included RCTs that investigated the following interventions: lower extremity strengthening, balance and multi-component exercise interventions on non-disease community-dwelling adults aged ≥ 65 years old. **Results:** Lower extremity strengthening exercise training of different methods revealed significant effects on the strength of lower extremity, balance outcomes and mobility. Balance exercise training of different methods reduced rate of injurious falls, improved static, dynamic and reactive balance, lower extremity strength as well as mobility. Multi-component exercise training reduced medically attended injurious falls and fallers, incidence of falls, fall-related emergency department visits as well as improved mobility, balance, and lower extremity strength. **Conclusions:** Physical exercises are effective in improving the components of balance, lower extremity strength, mobility and reducing falls and fall-related injuries. Therefore, they increase level of independency and enhance quality of life in older adults. Further research on fall prevention in low-income countries as well as for older adult in vulnerable contexts are needed.

Keywords: Fall, Elderly, Exercise, Strength, Balance

Identifying Factors That Affect Physical Activity of Prostate Cancer Patients

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INTRODUCTION: Prostate cancer is one of the most frequently diagnosed types of cancer among men worldwide. According to the National Cancer Register more than 4600 men are diagnosed with prostate cancer in Hungary each year.

Not only when the cancer has metastasized do the patients deal with pain and other symptoms relating to metastasis, but as the patients are usually older, they tend to have musculoskeletal disorders that may also cause chronic pain. Having constant physical pain cause result in physical inactivity. Even though physical activity can improve quality of life and that may result in better survival rates in cancer patients, promoting physical health has not been sufficiently integrated into clinical practice yet. According to previous studies, retaining cancer patients' physical function and cardiorespiratory fitness as long as possible are crucial for maximizing quality of life. It has become a pivotal issue as the disease burden associate with cancer has become massive worldwide.

AIM OF THE STUDY: Examining health behavior and physical activity of cancer patients are understudied areas in Hungary. One of the aims of the authors of this pilot-study was to assess the physical activity of Hungarian prostate cancer patients in order to identify factors of the existing health behavior and health status that affect the patients' physical activity and its characteristics.

METHOD: This pilot study's questionnaire survey was completed by 34 patients. It was conducted by the researchers using the validated European Health Interview Survey's questions about physical activity and further socio-demographic and health related questions.

RESULTS: Out of the examined factors, BMI classification, the classification of settlement and the occurrence of physical pain were proven to influence different physical activities. BMI classifications influenced the number of days in a week and the time spent with walking daily ($p < 0.05$). The latter was affected by the classification of settlement as well ($p = 0.001$). The time of carrying out sports, fitness on a typical day was proved to be determined by having physical pain ($p = 0.015$) and the geriatric classification of BMI ($p = 0.034$).

CONCLUSION: Physical activity of cancer patients and observed health behavior patterns should be considered important in clinical practice as they are essential factors in personalized guidance through the health care system and throughout the fight with cancer of the patients.

Keywords: physical activity, prostate cancer, BMI, health behavior, cancer

Attitudes of Hungarian consumers towards sustainable consumption

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Introduction: Nowadays there are several studies, which stating that comon poor dietary habits are a major contributor to the growing problem of climate change in the 21st century.

Objective: to determine the knowledge of the Hungarian society about sustainability and climate change, and identifying the main factors influencing purchasing habits and product choice.

Method: A quantitative cross-sectional study between 01.06.2021 - 01.02.2022, using a self-administered, online, anonymous questionnaire. Exclusion criteria were dietary on doctor's orders and age under 18 years. Total number of participants 158 people (n=158).

Results: Women are more presumably to write a shopping list (p=0.001) and carry a shopping bag (p=0.007), doing shopping on average 2.66 times a week. Who knew the OKOSTÁNYÉR® recommendation were significantly rarer to consider the taste as the most important feature of a product (p=0.031) more likely to choose from a selection of domestic products (p=0.039), more often to read product labels (p=0.038) and more open to try new products (p=0.028). Related to the age groups, it was found that younger are significantly more often aware about the OKOSTÁNYÉR® recommendation (p=0.03), BMI values were significantly higher at older ages (p=0.001). Participants, who collect the waist selectively, threw out significantly less food (p=0.01). There is no significant relation found between climate change activity and food waste reduction (p=0.4).

Conclusions: This research has confirmed that education and appropriate professional information - OKOSTÁNYÉR® - have a positive impact on the sustainable and health-conscious nutrition and purchasing habits, which is an important segment of the fight against climate change.

Keywords: climate change, product choice, food consumption, OKOSTÁNYÉR®, sustainability

Baseline data of Yoga intervention at the University of Pecs: Pilot Study

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Introduction: Individual's establishment and promotion, health is the most important factor in regard to development in society. Yoga is the most attractive method, as it combines many techniques and results in simple breathing, stretching and relaxation exercises which could be very useful for a person suffering from stress.

Aim: The main aim of the study was to analyse baseline data of the effect of physical activity with a special regard to regular yoga practice on general and mental health of the university students.

Methodology: 28 students with an average age of 23.54 ± 4.36 years were included, only healthy individuals (BMI 22.42 ± 3.42) could participate in the 10-week yoga intervention. Information on Physical Activity was recorded using the Global Physical Activity Questionnaire (GPAQ) and information for mental health was recorded by using the Depression Anxiety and Stress Scale 21 (DASS-21). Self-reported health and quality of life was measured with WHOQOL Brief Questionnaire before the start of the intervention. Based on the baseline data, descriptive statistics and Spearman's rank test was applied. We considered the result significant when $p < 0.05$.

Results: 75.00% of the respondents were female, with mostly urban residents 92.85%. From all the participants 78.57% of them were single, 46.43% were scholarship students. Participants stayed 1.89 ± 0.32 years in Hungary. They responded to their quality of life (4.04 ± 0.88) and were less satisfied with their general health (3.50 ± 0.96). 53.57% were at risk of depression, 64.29% had anxiety and 32.14% had severe stress based on DASS-21 sub-scale. With Spearman's RHO negative correlation was found between the length of yoga practice they had prior to the measurement, the stress score based on the DASS-21 ($R = -0.389$, $p = 0.041$).

Conclusion: High stress level proved the importance of yoga intervention which was also confirmed through inverse relation between previous yoga practice and stress level. For further results follow up data of the pilot study should be analysed.

Keywords: Asanas yoga, quality of life, university students, stress

The role of regular physical activity in cancer prevention in young adults

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Several studies had reported the beneficial effects of physical exercise on risks of cancer recurrence and mortality. However, few have focused on the prevention phase. The aim of this pilot study is to investigate the impact of a 4-week training program of work-matched, high-intensity combined exercise (strength and endurance) on the adaptive responses of general cancer biomarkers.

10 young adults participated in a 4-week training program scheduled for 3 sessions/week, with high intensity, separated by 24 h recovery. Each session was scheduled for 1h divided into 4 phases (warm up , resistance training, endurance training and cooling down). At the beginning and the end of the study period, participants were subject to a fitness evaluation, performing two physical laboratory tests (Bruce protocol and 6MWT). We have also measured physiological and molecular parameters and studied their relationship with the cardiovascular parameters obtained.

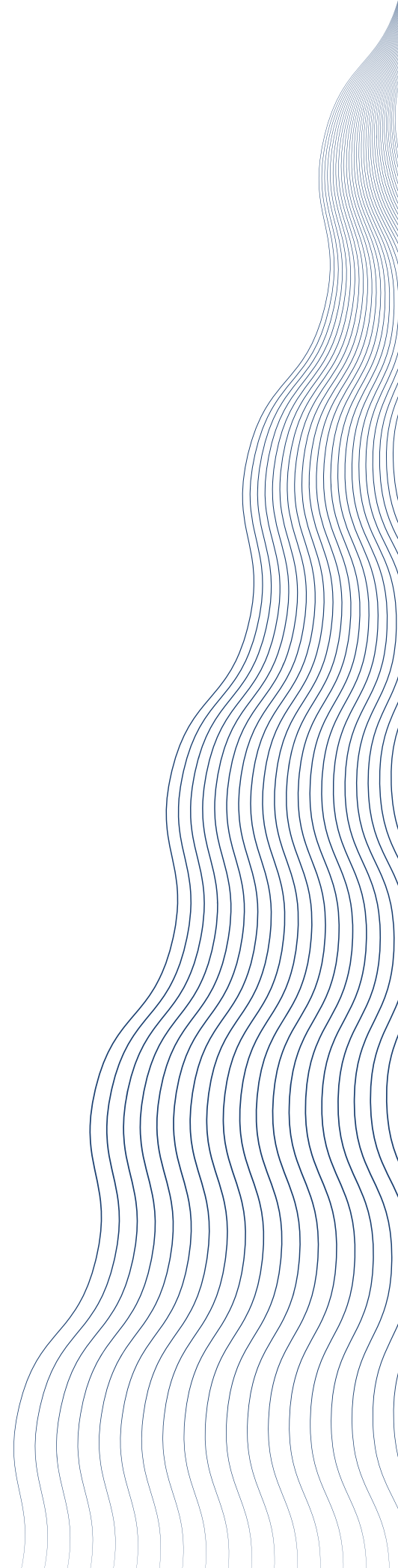
Results indicated that among cardiovascular parameters O₂pulse, VCO₂, PETCO₂, VE, VT(p<0.001) and resting systolic blood pressure(p<0.01) showed significant improvement between the two measured time points, while no changes observed in VO₂max neither HR. No significant changes in body composition (BMI, body fat, muscle mass percentage were found. Metabolic parameters (glucose, HDL, LDL, and creatinine were shown to be higher while insulin, albumin and cholesterol were lower although no significant differences was found). Immune parameters (CRP, white blood cell count, monocyte levels were found to be increased, while cortisol, eosinophil, basophile, red blood cells count, and hemoglobin were decreasing although not significant. MCV count and hematocrit were significantly lower after the training period(p<0.001 ; p<0.01 respectively). Serum testosterone and serum progesterone levels were significantly reduced(p<0.001; p<0.01 respectively) .Furthermore VO₂max was significantly correlated to MCH (p<0.1), MCHC(p<0.1) and TSH (p<0.01) after the training. HR was negatively correlated to cortisol(p<0.01), while lactate was significantly correlated to reticulocyte (p<0.001) count.

Our findings highlight the beneficial effect of physical exercise on the reduction of cancer risk induced by the alteration of different biomarkers. More research is needed to determine the associations between physical activity and cancer risk for common cancers like prostate as there is a great opportunity for cancer prevention through lifestyle.

Keywords: cancer, physical activity, prevention, biomarkers, combined training

ÉPÍTÉS ZET

ARCHITECTURE



Emberközpontú belsőépítészet a Solar Decathlonon

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² Belsőépítészeti, Alkalmazott és Kreatív Design Tanszék PTE / MIK / ÉSZI BAKDT [2018-]

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Építészként, kutatásomban olyan többgenerációs közösségi együttműködések előnyeivel bíró építészeti koncepciókban gondolkozom, melyek rugalmasan követik le változó társadalmunk igényeit és szükségleteit.

Egy nemzetközi építészeti verseny keretében azt vizsgáltam, hogy a közösségi együttlakozás koncepciója miként képes növelni egy jól megtervezett energiahatékony lakóház hatékonyságát.

Az elérhetőség, életképesség, fenntarthatóság projektspecifikus elveit megfogalmazva, ezek gerincén haladva alkottam meg a belsőépítészeti koncepciót, melynek terveit és kivitelezését hallgatókkal kiegészült munkacsoportommal valósítottuk meg.

Az eredményeként létrejött belsőépítészeti munka, szorosan együttműködve és azonosulva a mintaépület életbarát célkitűzéseivel, első díjat nyert el a 18 nemzetközi projektet felvonultató megmérettetésen.

Kulcsszavak: BELSŐÉPÍTÉSZET, KÖZÖSSÉG, FENNTARTHATÓSÁG

Kompozit anyagkutatás micéliummal

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A micélium a gombák vegetatív struktúrája, ami az egyik leginnovatívabb alapanyagaként jelentkezik a kortárs design területén. A növesztés metódusától függően számos anyag karakter kialakítható belőle annak függvényében, hogy milyen gombatörzset alkalmazunk.

Több design területen folynak izgalmas kísérletek, anyagkutatások a textilipartól a csomagolás technikáig. A legelőremutatóbb ezek közül a micélium kompozit anyagokkal kapcsolatos. Eltérő tápközeggel és gombatörzsekkel folynak növesztési kísérletek ezen a területen, melyek az anyagkarakterek, tulajdonságok és az ezekből adódó funkciók feltérképezése mellett a lehetséges felhasználási irányok megismerését célozzák. Bizonyos kísérletek azt mutatják, hogy a kis súlyú, ugyanakkor nagy sűrűségű micélium kompozitok belsőépítészeti felhasználásra alkalmas.

Kulcsszavak: gomba, anyagkutatás, belsőépítészet, design, micélium

Egy épülettípus-számos forma (fürdőépületek Hegedűs Ármin és Bóhm Henrik építészetében)

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Határon túli és magyar, fővárosi és vidéki, szecessziós és neobarokk - csak néhány különböző jelzőpár, mely igaz Hegedűs Ármin és Bóhm Henrik építészpáros fürdőépületeire. 30 év fürdőkultúrájának, építészetének és stílusainak változásait figyelhetjük meg az egyik legtermékenyebb, de mára elfeledett fürdőépítő iroda munkáin keresztül. Az egyes épületek és jellemzőik megismerésén és összehasonlításán túl betekinthetünk néhány századforduló utáni beruházás kulisszái mögé.

Kulcsszavak: Művészettörténet, Századforduló, építészet, középületek, fürdőkultúra

Explore the planning path and case practice of transforming from an industrial park to an industrial community in the context of urban renewal——from the perspective of ecomuseology

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In the perspective of Eco-museum, The research combines the practice of urban design of the old industrial city and the central block of Jingzhou Development Zone, in line with the concept of „people-city-industry” highly integrated development, in order to coordinate the relationship between residence, employment and service. The four basic elements of eco-museum are reflected in the study from a old industrial park to a new industrial community, that is, the regionality of life, dynamic development concept, the establishment of cultural environment, and the residents related to the region. The topic aims to seek for utilization and planning path of the stock space of industrial parks in the process of urban renewal in China and to cater to the changing production and lifestyle of the people in the community.

Keywords: Urban renewal; Chinese city; Industrial community; Urban planning; Ecomuseology

CFD Investigation of Enhancing Natural Ventilation in Attached Family House Buildings in Hungary

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Buildings are responsible for almost 40% of European Union (EU) final energy consumption. Energy consumption of the residential sector in Hungary is 12% higher than the EU average. Most of existing house buildings in Hungary are inefficient in term of their indoor comfort and energy consumption. This is where the refurbishment process takes a vital role bringing these houses back on the track of achieving the UN sustainable development goals. When a responsible refurbishment is conducted, it leaves room for integrating passive methods to enhance the building behavior. One of the most important passive methods is utilizing natural ventilation in order to reduce the cooling energy and to improve the Indoor Air Quality (IAQ). This research is investigating the integration of a passive ventilation shaft into an attached family house in Hungary as a part of its refurbishment process. The investigation uses Computational Fluid Dynamics (CFD) simulations validated by field measurements. The research finds that the inner shaft has a major influence on natural ventilation and its geometry can be optimized to improve the performance.

Keywords: CFD, Natural Ventilation, Sustainability, Green Buildings, Energy Efficiency

The Design-Based Learning method and Landscape Architecture for Environmental Literacy

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Humanity has reached a tipping point in terms of taking action to protect the natural world and its resources. Improving Environmental Education in schools is a fundamental approach to changing the current pessimistic prospect. In today's setting, learning environments need to offer programs that meet the constantly changing and increasingly complex sustainability scenario. Design-Based Learning (DBL) is one pedagogical approach that is already widely utilized to get youth interested in studying complex technical knowledge that will make them more aware of the environment. The goal of the DBL methodology, which integrates the design process into early education, is to have students apply problem-solving and inquiry-based learning techniques to real-world problems to understand curriculum content.

AIM: To analyze how Design-Based Learning and Landscape Architecture competencies support learning and agency for student youth in their everyday landscapes.

METHOD: A bibliographic review and analysis of relevant case studies were conducted to unearth relevant information on different frameworks under the proposed methodology, as well as how the concepts of Landscape Architecture were applied, along with research on the background of the institutions and communities in focus.

RESULTS AND CONCLUSIONS: The frameworks studied aimed to engage not just the school community but also the local community to broaden the awareness raised by the initiatives. Awareness is the most important product of the projects and is achieved by offering support to the participants in the necessity to attend to everyday challenges and uncover solutions based on practice and life experience. Aside from having well-structured programs and online platforms offering related content, extra personal professional support was offered, the latter being fundamental to attending to the challenges caused by the need to tailor the methodologies to each educational setting and community. The studied cases chosen for the current analysis showed to be all focused on the student's autonomy and were planned as action-based approaches directly linked to the school environments. These proved to be key attributes for the success in the implementation of each different framework, providing the school community with agency, support from specialized aid, and rewarding them with the positive outcomes of the interventions.

Keywords: Design-Based Learning; Landscape Architecture; Environmental Literacy; Environmental Education; Participatory Design

Innovációt támogató terek kialakítása egy Tudományos Parkban

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A kutatás az egyetemi közösségi terek tervezési elveit, funkcióit, fizikai jellemzőit, közösségteremtő szempont rendszereit vizsgálja és a PTE Tudományos és Innovációs Park tervein keresztül mutatja be.

A kutatás célja olyan külső és belső terek kialakítása, amelyek támogatják az interakciót, közösségépítést, tudományos információ cserét és elősegítik az innováció létrejöttét egy tervezési szempontrendszer alapján.

A tervezési folyamat különböző módszerekből állt, ami magában foglalt egy feltáró tanulmányt az interakciót támogató közösségi terekről és a felhasználóval folytatott folyamatos információcserét is.

A tanulmányban egy olyan tervezési szempontrendszert javasolunk ami hozzájárulhat a külső és belső épített környezetben lévő közösségi terek tervezéséhez az innovációt elősegítése érdekében.

A bemutatott építészeti térkialakítások és tervezési módszer hozzájárulhat a jövőbeni innovációt támogató tervezési projektekhez és útmutatóként szolgálhat a tervezőknek.

Kulcsszavak: közösségi tér, innovációs tér, közösségorientált, interakció támogatása

EURÓPAI ÉS NEMZETKÖZI JOG

EUROPEAN AND INTERNATIONAL LAW

The crisis of the Grand Ethiopian Renaissance Dam in light of the Nile water agreements and the legal system of international rivers

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In 2011, Ethiopia announced the start of building the Renaissance Dam on the international waters of the Nile River without consulting or consulting with the Nile Basin countries, mainly the downstream countries Egypt and Sudan. Negative on Egypt's revenues from the Nile River, which constitutes 95 percent of its water resources.

Subsequently, many meetings and conferences were held, but to date, a solution that satisfies all parties has not been reached.

Based on relevant books, scholarly articles, literature reviews, laws, and international conventions, this study sheds light on the rules of international law for international rivers concerning the Nile River in light of the Ethiopian Renaissance Dam crisis, through a historical account of the roots of the problem and developments up to the present time, and also reviews the most important conventions the organization of the waters of the Nile River, and the geography of the Nile Basin

The study attempts to provide legal solutions related to the Renaissance Dam crisis and possible legal solutions to avoid this potential conflict between the upstream and downstream countries of the Nile River.

The historical method is followed in this research by tracing legal historical evidence, standing on historical treaties and agreements, classifying, and criticizing it, in addition to reviewing the roots of the problem between upstream and downstream countries, and the developments of the situation regarding the Renaissance Dam crisis.”

Keywords: Renaissance Dam, Nile River, International Rivers, International Water Law.

How does the European Court of Justice shape its competence in the Common Foreign and Security Policy of the European Union?

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The Common Foreign and Security Policy (hereinafter: CFSP) was established as the only intergovernmental policy of the European Union, and remain such even after the Treaty of Lisbon, the last amendment of the founding Treaties of the EU. Pursuant to Article 24 of the Treaty of the European Union, the European Court of Justice (hereinafter: ECJ) shall not have jurisdiction regarding the instruments adopted under CFSP rules – however it still reviews the legality of CFSP regulations. This competence is meant as an exception in the Treaty, but the ECJ has interpreted it broadly.

The structure of the presentation incorporates the dogmatics of the special rules applying to the CFSP, but mainly focuses on judicial practice, where the major turning point was the first use of the rule of law as part of the legal reasoning in the Rosneft case (C-72/15). Since the Rosneft judgement, the ECJ justifies its jurisdiction in CFSP cases by its obligation to ensure effective judicial protection. The possibility to provide effective judicial protection is a key element of the rule of law, and seemingly a key element to the jurisdiction of the ECJ to rule on (some) CFSP matters.

The presentation aims to clarify the judicial practice of the ECJ in CFSP cases. It focuses on the „narrow interpretation of the limitations” on the Court’s jurisdiction to review CFSP matters. The objective of the analysis is to point out from one side the necessity of the effective judicial protection of natural or legal persons, and from the other side the limitations of the special rules and procedures concerning the CFSP.

The subject matter at hand is highly important in the EU. Besides being the only intergovernmental policy of the Union, CFSP is one of the most important ones, as it deals with the external security relations of the EU. The tendency of the ECJ to rule on CFSP matters is momentous in the development of the policy in a legal sense, because it grants effective judicial protection in the seemingly “black sheep” CFSP. The judicial challenges in the CFSP revolve around a central dilemma: how far can the ECJ extend its jurisdiction in the CFSP and still be in line with EU primary law? This presentation aims to present the result of the research, namely that the narrow interpretation of the limitations on the Court’s jurisdiction means that this interpretation enables the ECJ to enforce effective legal protection without violating the limits of its jurisdiction over the CFSP.

Keywords: CFSP, ECJ, jurisdiction, Rosneft

Lessons learned from the ECJ's case C-564/19 IS – the relevance of the directives requiring the harmonisation of procedural criminal law in the EU**Dr. Szijártó István¹**¹ Pécsi Tudományegyetem Állam- és Jogtudományi KarE-mail address of the first author/ presenter: szijarto.istvan@ajk.pte.hu

The legal basis for the harmonisation of procedural criminal law in the EU is relatively young. It was first provided directly in the Lisbon Treaty (Article 82(2) TFEU). Following the adoption of the Lisbon Treaty, the European Parliament and the Council started to adopt directives which aim to achieve such harmonisation concerning the status of the suspect or the accused in criminal proceedings. The directives create a core content for the rights of the suspect or the accused which are of fundamental importance during the criminal procedure. Notably, this core content is strongly tied to the corresponding fundamental rights as defined in the European Convention of Human Rights and the case law of the European Court of Human Rights. Although very protective from one point of view, this mechanism for providing standards of protection carries difficulties of interpretation since it defines fundamental principles rather than meticulous procedural rules. When these difficulties of interpretation appear, national courts can turn to the European Court of Justice for providing a preliminary ruling on certain questions of EU law. Thus, the ECJ gained an important role in the interpretation of these directives – a role which it already took on in several cases, most importantly in case C-564/19 IS concerning a Swedish-Turkish national before a Hungarian court. The presentation takes account of the judgement of the ECJ in the case analysing its content and its possible relevance for the future.

Keywords: EU law, harmonisation, procedural criminal law, C-564/19 IS, translation

Transnational Acquisition of Agricultural Lands – Comparative Study on Turkish and Hungarian Regulations

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Articles 35 and 36 of the Land Registry Law Nr.2644 are the fundamental regulations for the transnational acquisition of agricultural lands in Turkish legislation. Article 35 of the Land Registry Law, it is stipulated that the acquisition of real estate and limited real rights by foreigners can be regulated and limited in terms of the size and location of the acquired real estate, the nationality of the acquirer, the effect of the acquisition on the Republic of Turkey, its citizens and international relations. However, when it comes to the Hungarian practice, the transnational acquisition of agricultural lands is regulated in a more restrictive system. One of Hungary's greatest natural resources is the country's outstanding soil and agricultural land. Hungary has one of the largest percentages of agricultural land among EU nations at about half of its total area. Growth in agricultural investments has been seen by market players in recent years, along with an increase in the volume of agricultural produce. The New Land Act expanded the options for EU citizens to acquire land and make other agricultural investments, improving the economic situation for potential investors.

In this research, Hungarian and Turkish legislations on the transnational acquisition of agricultural lands are considered within the frame of comparative legal research methodology. Therefore, this research aims to address the similarities and differences in the legal framework concerning both Turkish and Hungarian legislation. Finally, the current state of the situation is highlighted within the frame of Agricultural law.

Keywords: land law, comparative law, agricultural law, acquisition, turkish law, hungarian law

International cooperation in combating money laundering and terrorist financing in the digital age: The Vietnamese experience

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Money laundering is a process that turns “dirty money” into “clean money.” The proceeds of crime are disguised to hide their illicit origins, and then the money is integrated into the legitimate economy. Often, but not always, the cleaning of dirty money involves moving it across national borders and integrating it into another economy. Criminals disguise the illegal origins of their wealth, and terrorist organizations try to conceal the destination and the purpose for which the money has been collected.

These activities have profound social consequences and require cooperative international activity to combat them. Cooperation between countries of the world to combat money laundering and trans-border organized crime is one of the most important problems of the world in the present days.

This study used qualitative research methods. Data were obtained through observation and documents analysis.

This research is expected to add to the literature on combating money laundering and terrorist financing in the present days. It describes best-practice efforts undertaken by Vietnamese government.

Keywords: Money laundering, terrorist financing, international cooperation, Vietnam

The importance of the recovery plan in terms of the EU's epidemic management

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Because the Chinese pandemic quickly spread throughout the European territory, the European Union must act quickly to safeguard itself and offer care to those who have already been affected. In addition to epidemic-related actions, the economy must be shielded from the virus's effects, and speedy regeneration and sustainability, as well as the economy's solvency, must be aided.

As the whole world has come to understand in the last two years, the COVID-19 does not respect national or international borders. To combat the coronavirus, governments had to do everything they could to safeguard their citizens. For EU member states, this has meant cooperating to help people survive the pandemic, as well as extending out outside their borders to assist other countries.

In order to help Member States „recover” from the economic and social difficulties caused by the pandemic, the EU has set up the European Union Recovery and Resilience Facility (RRF) to support recovery from the Covid-19 pandemic. The aim of it is to set up a recovery fund of €806.9 billion (€750 billion in 2018 prices), which is the Next Generation EU financial package. The new financial resource set up by the EU is designed to help Member States from a sustainable social and economic perspective and, accordingly, is mainly aimed at accelerating public investment and reforms.

It is worth noting that the two components of the largest stimulus package ever funded in Europe are the EU's long-term budget and the temporary Next Generation EU recovery facility described earlier.

The Next Generation EU is more than a recovery plan, it is an opportunity for Member States to emerge stronger from the pandemic, transform their economies, create opportunities and jobs.

The Recovery and Resilience Facility will provide €723.8 billion in loans and grants to support reforms and investments in the EU Member States. It aims to mitigate the social and economic impact of the coronavirus pandemic and to make European economies and societies more sustainable and resilient, and prepare them for the green and digital transition.

Keywords: COVID-19, Next Generation EU, EU funds, RRF

Social media content governance: international human rights law as a global standard of expected conduct?

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Introduction: The role of social media platforms in regulating public discourse is significantly increasing. Under such circumstances, it is essential to ensure that social media content governance is aligned with fundamental standards enshrined in the international human rights law (IHRL).

Aim: The goal of this research is to examine the state-focused IHRL standards on freedom of expression and to contemplate whether these standards can be applied to social media platforms as private actors. The publication investigates the European dimension of IHRL by examining the relevant standards within the United Nations (UN) and the Council of Europe (CoE).

Methods: This scientific investigation belongs to the category of doctrinal research. It employs functional and analytical methods.

Results: The relevant legal frameworks of the UN and the CoE establish that the state-focused IHRL standards on freedom of expression include the principles of legality, legitimacy, and necessity (proportionality) as envisaged in Article 19 of the International Covenant on Civil and Political Rights and Article 10 of the European Convention on Human Rights [1, 2].

Having clarified the state-focused IHRL standards on freedom of expression, the research puts forward a four-fold argument justifying the application of the international principles of legality, legitimacy, and necessity (proportionality) to platforms. A four-fold argument encompasses:

- voluntary acceptance of IHRL by certain platforms;
- states' positive IHRL obligations to protect FoE on social media;
- indirect horizontal effect of IHRL;
- soft law instruments of the UN and the CoE stipulating that platforms should follow IHRL [3].

Conclusions: IHRL standards have been initially created by states and for states. However, a four-fold argument can be made in favor of applying IHRL standards not only to states but also to platforms. Notwithstanding they do not constitute a silver bullet for all challenges of social media content governance, IHRL standards can still serve as a global standard of platforms' expected conduct.

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Keywords: Platforms, content governance, international human rights law, freedom of expression online

Issues of legal responsibility regarding to offences against cultural heritage

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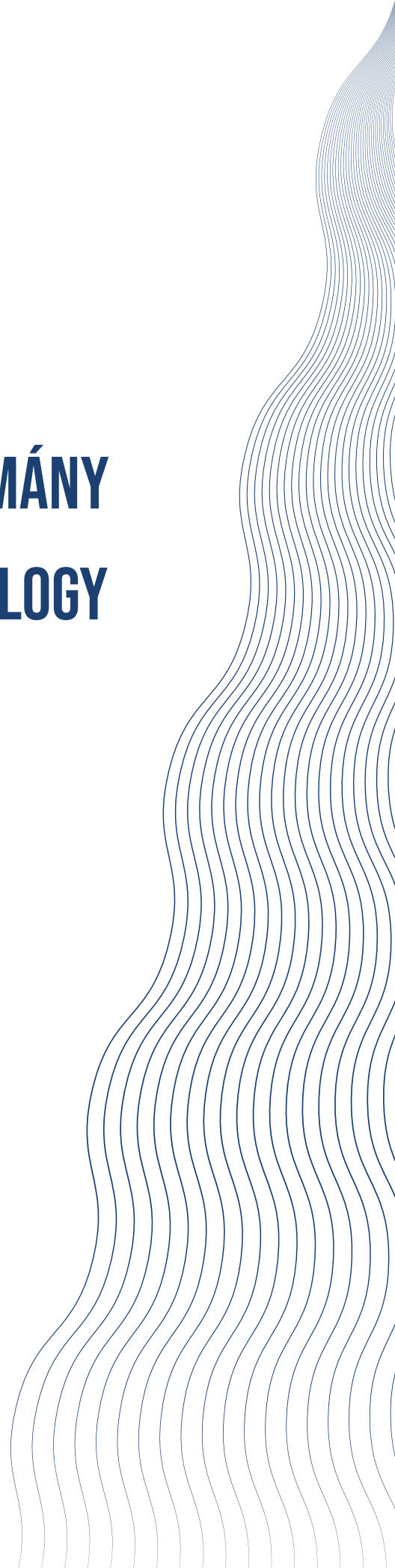
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My presentation focuses on the responsibility issues of offences related to cultural heritage within the framework of international law. Though numerous conventions pay attention to the importance of the protection and preservation of cultural heritages and cultural properties, there are significant differences between them. Which categories of cultural heritage are safeguarded regarding the convention? In which of these cases are conventions relevant, and what do we understand by cultural crimes? The sanctions and legal responsibility are very different in this field. Nowadays, the main question is whether current legal instruments and platforms are adequate, sufficient and efficient.

Keywords: cultural heritage, unesco, protection, responsibility

FILOZÓFIA ÉS HITTUDOMÁNY

PHILOSOPHY AND THEOLOGY



Deconstruction

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Deconstruction doesn't actually mean „demolition;” instead it means „breaking down” or analyzing something (especially the words in a work of fiction or nonfiction) to discover its true significance, which is supposedly almost never exactly what the author intended. A feminist may deconstruct an old novel to show how even an innocent-seeming story somehow depends on the oppression of women. A new western may deconstruct the myths of the old West and show lawmen as vicious and criminals as flawed but decent. Table manners, The Sound of Music, and cosmetics ads have all been the subjects of deconstructionist analysis. Of course, not everyone agrees with deconstructionist interpretations, and some people reject the whole idea of deconstruction, but most of us have run into it by now even if we didn't realize it.

Keywords: deconstruction, Jaque Derrida, Architecture

Az állati fordulat

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Harriet Ritvo amerikai történész 2007-ben állati fordulatnak nevezte azt az akadémiai fókuszváltást, ami a tudományos világban az ezredfordulón végbement. Ritvo, Richard Rorty nyelvi fordulatához és W. J. T. Mitchell képi fordulatához fogható gondolati váltásként beszél az állati fordulatról. Az azóta elmúlt 15 évben a kérdéskör tovább bontakozva diszciplínává formálódott. Az ember állat tanulmányok, kritikai állat tanulmányok, vagy másként nevezve, az antrozoológia számtalan új fogalmat, teóriát, nézőpontot kínál a téma iránt érdeklődők növekvő számának.

Az előadásom központjában e gondolkodásban beállt fordulat áll, ami a XXI. századi nyugati társadalom tagjainak cselekvéseit, döntéshozatalát a korábbtól markánsan eltérő módon befolyásolja. Egy újfajta viszonyulás érzékelhető az állatokkal kapcsolatban, amely jelenség addig az emberi környezetben értelmezhető oly alapvető fogalmainkat írja újra, mint például a család, társ, gyász vagy a szeretet.

Prezentációmban kifejtem a nyugati filozófiára jellemző ember-állat kapcsolat gondolkodásbeli struktúráját. Majd az állati fordulatra jellemző gondolati logikát nevezem meg. Ezt követően a Ritvói állati fordulatot elemzem, az általa idézett nyelvi és képi fordulatokat vizsgálva következtetéseket vonok le az állati fordulat indokaira vonatkozóan, és felrajzoltam azt az új emberképet, amelyet e fordulat megteremt. Itt kitérek kutatásomra, melynek címe: Az állatok, kiemelten a kutya szerepe a filozófiában. Platón „barlang hasonlatához” visszatérve, valamint Thomas Nagel, „What Is It Like to Be a Bat” című művére támaszkodva mutatom be azt a kiindulási pozíciót, ahonnan magyarázatot találok kutatásom témájának, a kritikai kutyatanulmányok, röviden kutyizmus, jelenségére.

Konklúzióként következtetéseket vonok le arra a paradigmaváltásra vonatkozóan, amit a XXI. századi állatfordulat magával hoz a nyugati társadalom gondolkodásában.

Kulcsszavak: Filozófia, állat, nyelvi fordulat, képi fordulat, Harriet Ritvo, Richard Rorty, evolúciós elmélet, antrozoológia, Thomas Nagel

Sión, minden templomok anyja

Somodiné dr. Dobó Katalin¹

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Az elmúlt 50 évben parázs vita bontakozott ki arról, hogy a jeruzsálemi Sión templom mennyire tekinthető hiteles helynek. Hol volt az a „felső terem” ahol Jézus a tanítványaival elfogyasztotta az Utolsó vacsorát? Fennmaradt-e az elnyomatás századaiban keresztény gyülekezeti hely Jeruzsálemben? Előadásomban saját kutatásaim eredményét szeretném ismertetni, amely Egeria IV. századi zarándokasszony Útleírásából merítve sorakoztat fel érveket a hely eredetisége mellett.

Röviden be óhajtom mutatni hely eredetiségét tagadó (BALDOVIN, BIBERSTEIN, TAFT, SCHWANK) és támogató (EPIPHANIUS, MADABAI MOZAIK, PIXNER, SKARSAUNE, MEYERS) véleményeket. Pár szóval vázolni szeretném a kevésbé felkészültek számára a történeti tényeket, amelyek szerint 70-ben Titus, majd 135-ben Hadrianus rombolta porig a várost.

Egeria Útinaplója egyértelműen bizonyosságot tesz arról, hogy a 380-as években Jeruzsálemben kétség nélkül vallották, hogy Sión temploma volt az a hely, ahol a feltámadott Úr megjelent tanítványai előtt, ahol felelősségre vonta Tamás apostolt, ahol a Szentlélek alászállt az apostolokra. (Érdekes módon az Utolsó vacsora ünnepét a Nagy Konstantin építette új bazilikában ünnepelték egy nagy közös eucharisziával. A gyülekezet székhelye a kis zsidó-keresztény templomról, amely Jakab püspök székhelye volt, áttevődött a császár építtette Szent Sír Komplexumra.)

Bemutatom Sión templomának jelentős szerepét a jeruzsálemi stációs liturgiában, majd részletesebben ismertetem a Sión templomban folytatott Tamás-napi és pünkösdi liturgiát. Javaslatot teszek arra vonatkozóan, hogy milyen történeti tényekkel köthető a Sión hegyén végzett liturgia „bűnbánati” jellege. Röviden összefoglalnám a „megostorozás oszlopának” hosszú történetét, és rávilágítanék arra a tényre, hogy a mai napig ott őriznek egy oszloptöredéket, alátámasztja a hely hitelességét.

PIXNER elméletének bemutatásával fejezném be, amelyet döntő bizonyítéknak tartok a hely hitelessége mellett.

Kulcsszavak: Jeruzsálem, liturgia, Egeria, Sión, pünkösdi, zsidókeresztény, zsinagóga

MÁSKÉPPMÁS - A numinózus helye az aranyborjú történetében

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Az aranyborjú esemény értelmezésekor jellemzően az ókori Közel-Keleti párhuzamokból, hagyományokból indulnak ki a kommentátorok, illetve magát a szöveget próbálják szóra bírni. Ezek – az amúgy egyáltalán nem haszontalan – vizsgálódások azonban mintha elfeledkeznének arról az alapvető tényről, hogy a Szentírás elsősorban a Szent és a választott nép kapcsolatáról szól.

Célom ennek a különleges kapcsolatnak a feltárása, melyet módszertanilag Rudolf Otto numinózus elméletének az Exodus szövegére alkalmazásával kívánok kivitelezni. Ezen belül az irracionális-rationális dinamika feltárása várhatóan előmozdítja a sínai-hegyi teofániát a narratíva szerint követő meghökkenő emberi reakció jobb megértését.

Eredmények: A szöveg vizsgálata feltárta, hogy az irracionálisként jellemzett numinózusra adott elvárt emberi reakció szintén irracionális, különösen amennyiben figyelembe vesszük Kirkegaard jellemzését is Ábrahámról, a hit hősről. A hit, az ismeretlenbe vetett bizalom ugyanis irracionális. A „hit valóságaként” azonban a próbatételek Izrael népe racionális reakcióit mutatják be (zúgolódás, aranyborjú), melyek nagyfokú bizalmatlanságot mutatnak. JHWH és népe kapcsolatának dinamikáját Vattamány Gyula a bábel-élmény (Otto kifejezésével: megütközés) - túllétele - illogikus reménység fogalmak segítségével írja le, vagy másképp az akció-reakció-korrekción mintázat segítségével is megragadható.

Következtetés: Otto elmélete, melynek egyik döntő mozzanata a Szent és az általa kiváltott vallási élmény irracionális jellegének “visszaperlése” megnyugtató választ ad az aranyborjú-esemény problematikájára, irracionális-rationális megközelítésbe helyezve azt. Otto alapján Vattamány mutat rá a *sensus numinis* retorikájáról írt tanulmányában: “Az irracionálissal való találkozás feldolgozása során az ember a racionális talaján állva próbálja meg megmagyarázni, megélni, illetve átkonvertálni azt az élményt (és kiváltóját), ami minden, csak nem racionális”.

Kulcsszavak: aranyborjú, numinózus, (ir)racionális, Otto, bábel-élmény

Egyházszakadások mintázata a kommunizmus idején

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A pártállami egyházpolitika több szinten is akadályozta az egyházak rendeltetésszerű működését. Jogbizonytalanságot teremtett azzal, hogy nem volt egységes vallásügyi törvény. Másrészt minden eszközt felhasznált az egyházi személyek politikai befolyásolására, ügynöki beépítésére. A külső nyomás, az egyházak négy fal közé szorítása, a vezetők beszerzése feszültséget okozott a tagságban, ami elégedetlenségben, vezetők elleni lázadásban és sokszor szakadásban nyilvánult meg.

A kutatás célja az egyik kiségyház példáján keresztül megvizsgálni a kommunizmus idején történő szakadások mintázatát, melynek megismerése után arra keresi a választ, hogy mindez a felekezetre, a magyar politikai környezetre jellemző, vagy követi az egyházszakadások általános szociológiai és lélektani törvényszerűségeit. A Hetednap Adventista Egyházban 1956-1975 között lezajlott három szakadás mintázatát hasonlítja össze egy történelmi egyház első világháború utáni két szakadásával, valamint nemzetközi szinten ismert és vizsgált szakadások általános jellemzőivel

Eredmények

Az esettanulmányban vizsgált kiségyház három szakadásánál egyértelműen kimutatható a kommunista diktatúra egyházellenessége, mint kiváltó ok. A kívülről gerjesztett hatalmi harc, a belső elégedetlenség, a protestálók fegyelmezésének módja, a hatósági beavatkozás szintén a mintázat részét képezi. A másik példa a Trianoni döntés utáni időszakban vizsgálja a Református Egyházban történt két szakadást, eltérő helyszíneken. A mintázatban szerepel a legitimációs válság, a vezetők sérelme, a helyi politikai helyzet befolyása, teológiai köntös megjelenítése. A harmadik, nemzetközi elemzés több nagyegyházi szakadásából rakja össze a közös pontokat, amelyek közül a legfontosabbak: a külső körülmények és a belső kegyességi irányzatok hatása, a hatalmi csomópontok dinamikája, az identitás deficit és a karizmatikus vezetők szerepe.

Konklúziók

A három elemzés összegzéséből az derül ki, hogy bár a szakadások eltérő időszakban és helyszíneken valósultak meg, a sarokpontok azonosak. A Hetednap Adventista Egyházban történt három nagyobb szakadás nem tekinthető sem adventista, sem specifikusan magyar, sem az önkényuralmi rendszer által kikényszerített jelenségnek. A szakadások szociológiai, társadalmi, lélektani és vezetéstechnikai törvényszerűségeket követnek, annak ellenére, hogy a szellemi vezetők mindig megtalálták a teológiai, lelki indoklást.

Kulcsszavak: egyházszakadás, pártállam, mintázat, kiségyházi, lázadás

The Soteriological Significance of Christ's Blood in the New Testament - Christ's Blood in Relevance to the Doctrine of Penal Substitutionary Atonement

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Taking a panorama view on the international literature it is conspicuous that in every nation's culture the concept of blood has fundamental power in shaping worldview. Both in the European culture and outside we can find examples that prove that the relation to blood in many cases is defined by religious convictions: blood donations, DNA tests, eugenics, national identity etc. In biblical aspect „Christ's blood” is the key figure to reflect on the relationship between man and God. By using this „umbrella term” new testament writers speak about redemption, atonement, mercy, mediation, substitution, doing justice, sacrifice, forgiveness of sins etc.

The aim of this research is to map the soteriological models in the canon of the New Testament and examine the emphasis and meaning of blood as a NT concept in these paradigms.

In the scope of Christ's redemptive work blood appears to be an ambivalent carrier of life and death, suffering and healing, blessing and curse, rage and reconciliation, sacrifice and propitiation. The analysis of the particular soteriological paradigms offered by New Testament writers are revealing in the role of blood in acquiring faith and developing christian identity.

The methodology used in the research draws deeply on structuralism, cultural anthropology, semiotics and intertextualism to investigate the role of blood. Theory is primarily defined by soteriological perspectives. The paradigms build on different key concepts: δικαιοσύνη, λύτρον-(ἀπο)λύτρωσις, πίστις Χριστοῦ, αἰματεκχυσία, *kipper* / τὸ ἰλαστήριον and Ebed Yahve. The New Testament proves heterogeneous in as much as these models can reveal something about salvation only by being profoundly interwoven.

The presentation would like to focus on the image of the suffering servant in which the soteriological traits of the Suffering Substitute and unconditional obedience are clearly seen. The image of Ebed Yahve invokes the paradigms of martyrology and noble death. The topic is no wonder intriguing and actual when considering the doctrine of Penal Substitutionary Atonement.

Az e-sport jogfilozófiai megközelítése

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Az e-sport és a digitális világ térnyerésével egyre nagyobb szerepet kap a jogi szabályozottság hiánya. A digitális világban egyre több új bűncselekmény alakul ki vagy éppen alakul át. Ebből talán az egyik legkevésbé ismert mégis szinte minden ember életének részét képezi az e-sporttal kapcsolatos bűncselekmények. A technika rohamos fejlődésével és változásával nem tud lépést tartani a jog és hatóságok sem. A digitális bizonyíték a jövő, sőt talán már a jelen legnagyobb számban felhasznált bizonyítéka. A mindennapi életünk szerves részét képezi a technika és a digitalizáció. Az ezzel együtt járó veszélyek pedig új, eddig ismeretlen bűncselekmények megjelenését vonják magukkal. Különbséget kell tennünk digitális és digitalizált bizonyíték között. A kettő között a fő különbség a bizonyító erő. A digitalizált bizonyítékok materiális formában vannak jelen és az eljárás során kerülnek digitalizálásra. Szemben a digitalizált bizonyítékkal, ami kezdetől fogva digitális formában van jelen. A különbség pedig a bizonyító erő, mivel a idealizált bizonyíték mögött több évtizedes egyes esetben évszázados tapasztalat áll. Ismerjük az erősségeit és a gyengéit is, a digitális bizonyítékok pedig egy ismeret világ jelenleg a felhasználók számára. A kutatásom tárgyak ezeknek az új bizonyítékoknak a feltárása, elemzése, vizsgálata és gyakorlati alkalmazhatósága az e-sport területén. A bizonyítékok könnyen manipulálhatók és hamisíthatók.

HADTUDOMÁNY ÉS NEMZETKÖZI TUDOMÁNYOK

MILITARY AND INTERNATIONAL SCIENCES



Transaction costs and architectural complexity in no-capability defence acquisition

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The paper addresses the research gap between big and small military powers and investigates the contemporary challenges in defence acquisition through the perspective of a no-capability NATO nation. In the first part, the author discusses different contractual approaches in no-capability defence acquisition using the lens of Williamson's (1979) Transaction Cost Economics and identifies three important transaction cost factors: seconding liaison officers, aligning budget calendars and agreeing on key user requirements. In the second part, the author inquires the systemic complexity that lies at the heart modern weapon systems and shapes defence contracts.

Drawing on Ahner et al.'s (2019) complexity factors of advanced weapon systems and Henderson's and Clark's (1990) concept of architectural innovation, the analysis demonstrates that small and no-capability NATO nations have a structural disadvantage in relation to developing and acquiring advanced weapon systems. In the final part, the author examines the "dual-use development strategy" as a vehicle for overcoming the structural no-capability disadvantage. Two contrasting case studies on Luxembourg and Estonia illustrate the importance of the competent and demanding military customer (Eliasson 2017) and the need for further research on the military, economic and industrial profile of small and no-capability NATO nations. There limits of the paper are in relation to the case studies and the Russia-Ukraine war.

Keywords: transaction costs; architectural complexity; no-capability defence acquisition; Luxembourg

Analyzing EU perceptions in Central Asian mass media: the case of Tajikistani media

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Introduction: Central Asia remains one of the world's least-understood regions at the crossroads of Russia, the European Union, China, and the Islamic world, despite being a significant theatre for muscle-flexing by the great powers and regional players. In 2019, the EU updated its strategy for Central Asia, twelve years after its first strategy. EU is becoming one of the prominent donors and partners for Central Asian states, and there is little information available on how Central Asians perceive the EU.

Aim: Central Asia is arguably one of the few regions that have remained beyond the interest of scholars in studying EU images. This paper aims to analyze Central Asian perception about the EU's role in the region. To gain a better understanding of the situation, the paper examines secondary sources, state-owned news agency, and independent news website. The paper's first section covers a literature review on EU perceptions in Central Asia, followed by a media content analysis on understanding EU perceptions in Tajikistan, a less researched country in EU-Central Asia relations, in the second section of the paper.

Method: Methodologically, this paper is multi-layered. The first part of the paper analyzes literature related to EU- Central Asia relations and EU perceptions in Central Asian countries. Secondly, the paper analyzes mass media articles collected from two Tajikistani news agencies' websites, namely, the National Information Agency of Tajikistan (NIAT) Khovar and Asia-Plus News Agency, with the qualitative content analysis.

Results: According to the findings of this study, EU-Central Asia, in particular, the relationship with Tajikistan is viewed positively by both independent and state mass media. However, the perception of the EU as a normative power is quite ambiguous, while the image of the EU as an economic donor/partner and security partner is prominent.

Conclusions: Despite a comparatively active policy from 2019, the EU still remained a relatively weak actor in Central Asia and suffers from visibility issues. In general, EU-Tajikistan/Central Asia cooperation is perceived positively, and the EU is perceived as a security partner, donor and to some extent a norm promoter in specific areas.

Keywords: Perceptions, Economic partner, Normative power, Donor, Security partner.

The commuting habits of the small villages near the Austrian-Hungarian border in Vas county

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My presentation was created in connection with a PhD-thesis about the opportunities of small villages in Vas county. Small villages are those with population under 500. On the 1st January 2020 there were 136 small villages from the 216 settlements in Vas county. I analysed the changes of the population from 1990 until 2020 by using census and other data of the Hungarian Central Statistical Office (KSH).

I present the commuting habits to Austria in the Körmend-centered parliamentary individual district, based on the representative research of the Závecz Research Institute. This district includes 127 settlements, from which 88 are small villages. Important questions were: commuting, border crossing problems during the pandemic situation and motivations of working in Austria. Many graduated people work in Austria for higher salary but at a lower level than earlier in Hungary.

Results: I compared those 42 villages that are located not further than 10 km from the Austrian-Hungarian border. I found that the closeness of the border has a strong effect on the migration rates of the smaller villages. Among the commuters, higher salary was the biggest motivation but language study and flexible working conditions were important, as well.

Conclusions: In Vas county there is one very important factor which could strengthen the population growth: the proximity of the Austrian border. Younger people with lower education level tend to commute but graduated ones do commute, as well.

Keywords: commuting, small villages, Austria, Vas county, population

The role of social networks in local integration

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The research focuses on the role of relationships in the local integration of foreign students. Therefore, the main research questions are: What is the role of interpersonal and intercultural relations in the context of integration? What synchronicity can be observed between relationships and acculturation? The theoretical background can be divided into five main dimensions which are: social integration, social capital, cultural capital, acculturation and relations. The subjects of my research are foreign students who pursue their studies at the University of Debrecen. By assessing the micro-social embeddedness of the subjects, we can gain deeper knowledge of their attitudes towards integration and its outcomes.

Keywords: social networks, integration, acculturation

Opposing discourses of terror: The use of the terrorist label by the Turkish and Russian governments in the northern Syrian conflict

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The goal of the paper is to examine how the Turkish and Russian Governments are using the term „terrorist” in their public diplomacy towards the Syrian conflict. Following the introduction, the author outlines the theoretical framework – namely the securitisation theory –, then presents a concept of terrorism, which is focusing on the instrumentalisation of the terrorist label in discursive processes. Henceforward, the aforementioned goal is accomplished by examining the Turkish and Russian security discourses on two interrelated issues of the Syrian war: Turkey’s Operation Peace Spring in October 2019, and the Russian–Syrian offensive codenamed Operation Dawn of Idlib between April 2019 and March 2020. As the primary aim of the study is to examine how the two governments framed the interventions in front of the international community, relevant speeches and articles given or written by high-ranking Russian and Turkish diplomats are analysed, to identify recurring elements in the two discourses. Special attention is paid to the analysis of speeches given at the United Nation’s Security Council, obtained from the United Nations Digital Library. Based on the detailed analysis of the aforementioned sources, the paper displays how the two states justified their military interventions, defined their own roles, and framed the non-governmental actors involved in the conflicts. According to the conclusion of the author, despite the numerous similarities in their discourses, Turkey and Russia define oppositely, who is, and who is not a terrorist in Syria, which constitutes a major collision point between their geostrategic perspectives.

Keywords: Turkey, Russia, Syria, terrorism, security, diplomacy

Shanghai Cooperation Organization (SCO): its past, present and future

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Shanghai Cooperation Organization, an expanding regional formation, encompassing the giant countries of Eurasia, has frequently been interpreted as an anti-western alignment given the presence of China and Russia now Iran. Initially, the regional platform was established to counter the threat of terrorism and extremism, coordinate the course of actions of the countries, and facilitate cooperation. The organization gained further relevance following the accession of new members as such India, Pakistan, and Iran. The most recent summit of SCO held in Uzbekistan has been the showcase of the growing reputation of the organization.

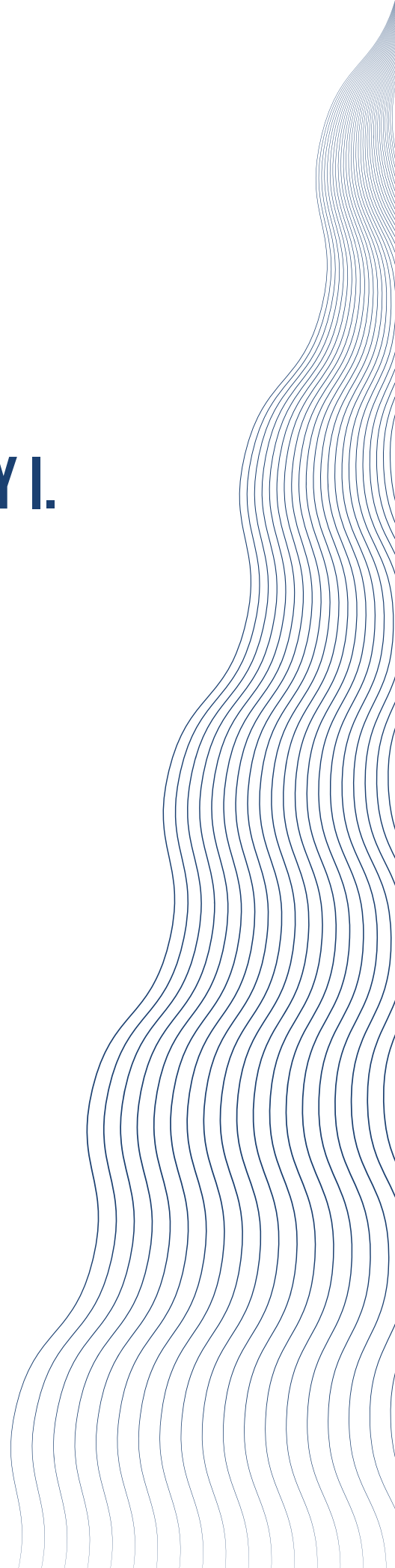
This article aims to discuss the background of the SCO, its past, relevance and functions, and its role in Central Asia and beyond. Moreover, it further focuses on the possible scenarios of its transformation, its expanding reach, and the future.

Although the latest and rapid enlargements of the SCO bolstered its weight and geopolitical standing, the overall perspective remains uncertain. However, now it owes a historical chance to turn into a new multilateral Eurasian platform.

Keywords: Shanghai Cooperation Organization, Central Asia, Russia - China, regionalism, transformation of the SCO

IRODALOMTUDOMÁNY I.

LITERATURE I.



The musical accompaniment of silent films in the contemporary Hungarian press

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During the era of silent films, between 1896 and 1930, Budapest was referred to as the “city of cinemas”, according to data from 1913, there were 111 movie theaters operating in the capital at that time. Until the release of the sound film in Hungary, the screenings were predominantly accompanied by live music, most often a solo piano or a piano-violin line-up, or perhaps a dulcimer. With the flourishing of the cinema culture, by the 1920s, orchestras were employed permanently in the larger, more elegant movie theaters, and a very significant musical life developed in many institutions, managed by professional authorities. Despite all of this, the area has received very little attention from a musicological point of view, while the literature on cinema as a cultural scene, as well as the Hungarian historical and aesthetic literature on silent films is constantly expanding. During my research, I tried to explore the available press sources in order to map the musical practice and repertoire of the capital’s cinemas. While in the early years there were surprisingly few articles dealing with the music played in cinemas, as time progressed, the relevant articles gradually multiplied and deepened: just as the film is increasingly being reevaluated from a spectacle to a cultural product, so too is the musical accompaniment. In my paper, I would like to present the most significant results of the press research in relation to the musical repertoire, the financial conditions and the operating order of the orchestras.

Keywords: music, classical music, cinema, silent film, Budapest

Locating Literary Identity in J. M. Coetzee's *Life and Times of Michael K* (1983) and *Foe* (1986): A Critical Study

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J. M. Coetzee, a widely acclaimed South African novelist, has often used his country's apartheid system as well as silence to mirror the bleakness of the human condition. The very process of writing anti-apartheid literature during that period brought world recognition to the African situation as well as his works. However, this writing resulted in danger, disdain, and persecution to these authors whose government struggled to conceal the truth and prevent these voices from telling their stories. Although Coetzee's oeuvre is widely considered as a milestone in postcolonial anti-apartheid literature, his works were perceived as 'too oblique with insufficient political charge'. In this paper, I will try to refute early criticisms of Coetzee's fiction that his works failed to take a definitive stance on the politics of apartheid. The central focus is the way in which Coetzee chooses his diction to arouse powerful imagery and symbolism correlating the conflicts, both internal and external, of his characters with the real ideological and physical conflicts that enveloped the apartheid.

Keywords: apartheid, conflict, identity, postcolonialism, resistance

Feminist insights from Middle-Eastern Literature: What is being inherited? A feminist reading of the Palestinian novelist Sahar Khalifeh's *The Inheritance*

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The Palestinian literature is being described as a marginalized arena of study since little attention has been devoted to explore the Palestinian literary works in relation to world literature. More specifically, little attention has been devoted to explore the writings of Palestinian female writers. Thus, the Palestinian female remains a veiled subject and little research is being dedicated to de-veil this Oriental subject to the global scene. Accordingly, this research attempts to broaden the scene through analysing the literary works of the Palestinian female writer Sahar Khalifeh, in particular her novel *The inheritance*.

The research elaborates on the way Khalifeh's characters negotiate their identity within the Palestinian society that suffers from both occupation and the patriarchal system. Thus, the research traces the way Khalifeh portrays her female characters in the novel during their attempts to establish their identity under this double colonization imposed on the Palestinian society.

The research draws on post-colonial feminist theories since the Palestinian female appears as an oppressed (colonized) subject who has her own unique challenges. In addition, the research doubts the concept of 'sisterhood' since non-western women should not be treated as a homogenous category with coherent identity and universal characteristics; instead, social, religious, political and cultural factors should be taken into consideration when addressing the woman question in Third World countries.

The research concludes that all the practices of the Palestinian females are subject to patriarchal traditions whereas the male figures are not responsible to observe their morality. Such ideologies and patriarchal practices continue to veil, circumscribe women's lives and prevent them from being full citizens within the Palestinian society. Thus, in Khalifeh's work, women still appear as victims of the inherited patriarchal traditions.

Keywords: Palestinian literature, Patriarchal system, Sahar Khalifeh, The Inheritance

Doctor Faustus of Marlowe: The Evil at the frontier of hermeneutic and therapeutic reading

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I. Introduction

Unlike person-centered bibliotherapy (Béres) the text-focused hermeneutic literature therapy (Jeny) connects the therapeutic dimension with interpretation (Gilbert, p. 242.).

1. premise: Hermeneutic bibliotherapy can be practised with the aim of relieving individual anxiety as a universal experience (Heidegger, Yalom).

2. premise: The classics have a direct communicative power, making possible to cross temporal distances (Gadamer, p. 325.) and to reach the imagery world of individual Psyche (Szabó, p. 46.).

3. premise: The concept of Satan is a special existential concern in our culture. In terms of Yalom it has to do with the loss of freedom or individuality in an interpersonal relationship. Self-reflecting Self appears during the Renaissance in European literature (Bókay) and it can be surely interpreted as the manifestation of the collective shadow personality of Christian culture. Nevertheless symbols can be understood only individually in a dialogue (Jung, 1993., p. 55.) by metaphoric language (Szabó, p. 18–19.). These metaphors are alike identity themes of Norman Holland (Holland, 2016.) and are suitable for mapping the imagery world of individual Self, since conceptual metaphors are based on images that turn into symbols (Szabó, p. 196.).

II. Goals

The goals of my research is to develop a hermeneutic model of bibliotherapeutical reading, which connects interpretation with the therapeutic method of symbolization (Kapitány–Kapitány). The hermeneutic model of translation (Steiner) can serve as a model of this process.

III. Methods

At the University of Pécs, in the fall semester of 2021, based on the method of close reading, the reader response theory of Norman Holland (Holland, 2008.), the four ultimate existential concerns of Irvin Yalom and the archetypes of Carl Gustav Jung (Jung, 2017., p. 43.) with a group of four students we read Doctor Faustus of Marlowe with the aim of shaping our individual Satan. In advance, everybody collected their nightmares, and we also used expressive writing (Pennebaker-Evans) and the Renaissance Visconti-Sforza tarot-cards, based on Jungian archetypes, to help forming random unconscious associations.

IV. Results

Thereby the members of the group were able to verbalize their anxieties, personalize their individual Satan, finding him among their close family members or former lovers. Meanwhile a lively dialogue with a more than four-hundred-year-old classical literary work could be conducted.

Keywords: Bibliotherapy, hermeneutic, symbol therapy, Self, identity

The poetic relationship between inspiration and life in the poetry of Lőrinc Szabó

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My research delves into a new aspect of Lőrinc Szabó's poetry: the poetic relationship between inspiration and life. The poetic process and biological existence are intertwined in his poetry and this connection has an impact on his poetic expression.

I aim to analyse the ways in which inspiration and life connect on a semantic, lyric and linguistic level in the poetry of Lőrinc Szabó. My interpretation helps to develop a method of literary studies, so the research of life and inspiration move into a new dimension.

At the core of my research, is the close reading of poems by Lőrinc Szabó. I approach the lyric connections of inspiration and life with my interpretation of Vers versek helyett (Verse instead of verses). I contextualise the results of this close reading, so we get a broader perspective on his lyrical expression.

The research shows that inspiration and life have a correlation on biological, linguistic and (meta) poetic levels in the poetry of Lőrinc Szabó. This synthesis highlights his poetry in the twentieth century and gives a new definition to inspiration.

Keywords: inspiration, life, twentieth century poetry, poetry of Lőrinc Szabó

Death and Memory in Shakespeare's Venus and Adonis

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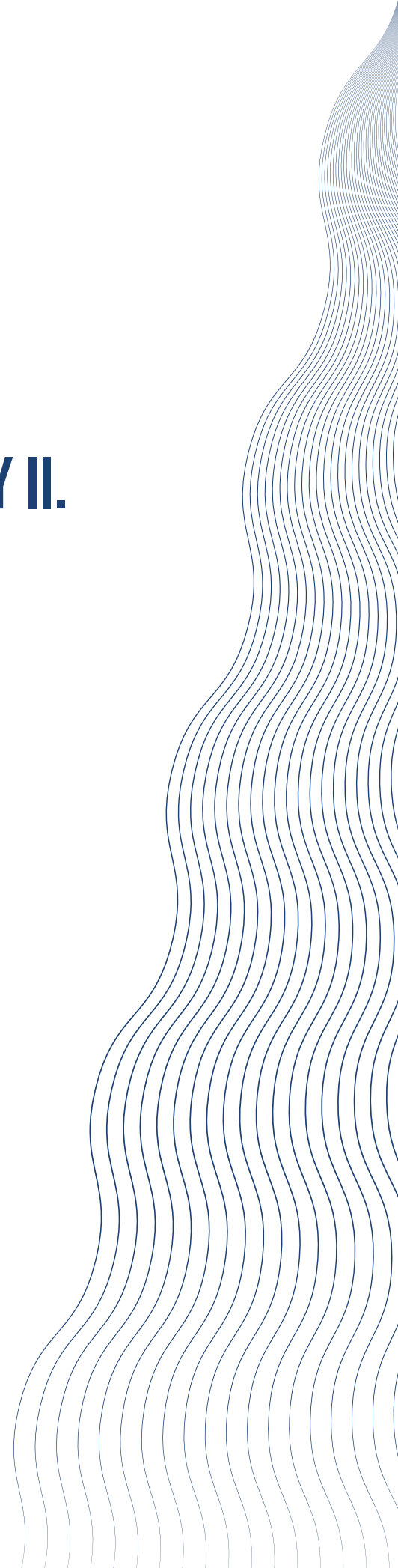
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My presentation argues that by focusing on the last 165 lines of Shakespeare's narrative poem, Venus and Adonis, spanning from the discovery of Adonis' dead body to Venus' leaving for Paphos in her dove-pulled chariot, we gain a deeper understanding of the whole poem. Under the surface of all the humour, wit and eroticism of the problematic love relationship, we witness another conflict unfolding through vivid images: the opposition between the protagonists' views about life after death, resulting in Adonis' refusal of the goddess and Venus' reaction to Adonis' death. This study ventures to interpret Adonis' "metamorphosis" into a flower from the angle of this underlying opposition, reflecting on Hans Belting's approach to the image and its connection to death, and the role of images and writing in cultural memory as described in the works of Aleida Assmann. Carefully observing the images of death, mourning and remembering, with particular regard to Venus' personal memories and how she uses them to create an image to be remembered by future generations, the poem's denouement can be perceived as one displaying the process of cultural memory in the making.

Keywords: Shakespeare, death, cultural memory, iconology

IRODALOMTUDOMÁNY II.

LITERATURE II.



A felnőtté válás reprezentációja Szabó István korai nagyjátékfilmjeiben (Álmodozások kora (1964), Apa – egy hit naplója (1966), Szerelmesfilm (1970))

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Tanulmányomban Szabó István első trilógiájában megjelenő Bildung narratíva, azaz a fiatalokról szóló változás-történetek tematikus és formai sajátosságait elemzem.

Szabó István egyike volt azoknak a fiatal rendezőknek a magyar új hullám (1963-1969) ideje alatt, akik személyes hangú, modern alkotásaikkal átformálták a magyar filmtörténet stílusterképét a hatvanas évek elején-közepén. A fiatal rendezők (Szabó mellett Gaál István, Kósa Ferenc, Sára Sándor, Sándor Pál) önéletrajzi ihletésű, szubjektív hangvételű Így jöttem-filmjeikben tematizálták a „nagy generáció” felnevelésének személyes és kollektív, nemzedéki élményét.

Az Álmodozások kora, az Apa – egy hit naplója és a Szerelmesfilm főszereplője Bálint András, akinek személyét a rendező alteregójaként értelmezhetjük. Ez a három alkotás egy fiatal felnőtt küzdelmeit mutatja meg a felnőtté válás útvesztőjében. A protagonista transzformációját ezekben az alkotásokban a szerelem, a munka, a halál és az utazás (legyen az fizikai helyváltoztatás vagy mentális utazás) alakítják. Szabó filmjeiben a fiatal felnőttek identitásválsága a történelemmel szoros összefüggésben reprezentálódik: a múlttal (II. világháború, nyilas üldözés, 56-os forradalom) való szembenézés és számadás a rendező nemzedéki élményeiből fakad.

A változás-narratívákban a modern filmművészet jellemző jegyei közül a szubjektivitás és a reflexió is hangsúlyos szerepet tölt be. A szubjektivitás megjelenése a rendező önéletrajzi jellegű történeteiben jelenik meg, ezt az alteregó szereplő alkalmazása is hangsúlyozza. Ezekben az alkotásban narrátort is alkalmaz Szabó, mely szintén a személyességet erősíti; ráadásul a narratori pozíciókban történő váltások is a felnőtté válás dilemmáját reprezentálják. Több esetben lírai, szubjektív felvételeket alkalmaz a személyességet és a nézői azonosulást elősegítendő. A reflexió ezekben az alkotásokban a mozi gyakori reprezentációjában, és – a francia új hullám hatását mutató –, a filmtörténeti hagyományra reflektáló utalásokban azonosítható, mellyel Szabó lesz az egyik első, ezt meghonosító rendező a magyar film történetében.

Ebben a tanulmányban azt mutattam be, hogy miként vált meghatározó tematikus-formai jeggyé a Bildung narratíva Szabó István első trilógiájában.

Kulcsszavak: magyar filmtörténet, modernizmus, Szabó István, Bildung, fiatalok

A pesti kabaré születése

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Pesti kabaréről 1901 óta beszélhetünk. Létrejöttének vizsgálatában a nemzetközi példákat és a hazai előzményeket egyaránt vizsgálnunk kell. A kabaré Európa-szerte jellegzetesen nagyvárosi műfajként jelentkezett. Magyarországon is Budapest lett a műfaj központja és közege. Itt volt adott a legjobb infrastruktúra, a legszélesebb közönség, és itt adódott a legtöbb, kupléba, konferanszba vagy blüettbe kívánczó téma, amely a színpadon játszó és a nézőtéren ülők közös élményanyaga volt.

A kabaré létrejötté új színnel gazdagította a magyar színházi kultúrát, irodalmat, könnyűzenét és reklámgrafikát, emellett kiemelkedő jelentősége volt a magyar nyelvű szórakoztatóipar kiépülésében és a budapesti köznyelv gazdagodásában is.

Az előadás arra keresi a választ, hogy milyen kölcsönhatások fedezhetők fel a kabaré és annak előzményei, illetve a kor társadalmi viszonyai között, továbbá milyen szerepe volt a kabaré megszületésében néhány „ködlovagnak”, akik párizsi és berlini tapasztalataikat magyar közegbe próbálták átültetni.

A prezentáció vázlatos körképet ad a századforduló Budapestjének szórakoztatóiparáról, bemutatva a német nyelvű zenés kávéházak és orfeumok, illetve a helyükbe lépő magyar nyelvű kabarék sajátosságait a városi tér és a kultúra szempontjából.

Kulcsszavak: kabaré

Kép-írás - Artemisia Gentileschi és Rosalba Carrera csodálatos pályafutása

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Két különleges festő, két különleges művészegyéniség, két rendkívüli nő. Artemisia Gentileschi a firenzei barokk festészet kiemelkedő tagja, a firenzei akadémia első női tagja, Caravaggio követője, egyben rendkívül hányattatott és kegyetlen sorsot elszenvedett nő. Rosalba Carrera a Settecento Velencéjének ünnepest portréfestője, Európa-hírű alkotó. Az előadás kettejük pályafutását, illetve a női alkotók helyzetét vizsgálja a barokk idején, a két festőművész egy-egy önarcképének komparatiztikai elemzésén keresztül, a festményeket egyfajta szövegként elemezve.

Kulcsszavak: barokk, Firenze, Velence, női alkotók, önarckép

A város mint emlékezet az 1989-es rendszerváltozás tükrében a kortárs női lengyel prózában

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A kutatás abból a hipotézisből indul ki, hogy a városi és földrajzi terek politikai, kulturális és szociális reflexiók, ennek következtében a városkép vagy a tájkép minden esetben a történelem lenyomata is. A települések térbeli megjelenései, kivételései a társadalmi válságnak és a történelmi korszakoknak, a városnak külön szótára és nyelvezete van, amit az épületek, a terek tükröznek. Ezek a „beszélő” városok nyitottak térben és időben, illetve az ön-élet-írás színtereivé válnak, mivel város terei megpróbálnak kifejezési formákat találni az el nem mondott traumák láttatására, azaz a város-elméletek egyben szubjektum-elméletek is

A vizsgálódás legfontosabb kérdésköre, milyen sajátos lehetőségei és kihívásai vannak a lengyel kortárs női irodalomnak a társadalmi emlékezet mobilizációjára, a traumatikus múlttal való szembenézés lehetőségeinek megteremtésére? Olga Tokarczuk: *Dom dzienny, dom nocny* (Nappali ház, éjjeli ház) és Joanna Bator Piaskowa Góra (Homokhegy) című regényeiből vett példák segítségével mutatom be az emlékezet és a múltfeldolgozás viszonyát Lengyelország kelet-közép-európai történelmi kontextusában. Kiváltképp a második világháborút és az 1989-es rendszerváltozást érintő történelmi eseményekre való reflektálás mikéntjeire térek ki.

A kutatás további célkitűzése, hogy feltárja az 1989 utáni lengyel női irodalom hogyan próbál részt vállalni a huszadik századi nagy társadalmi traumák feldolgozásában. Továbbá a későbbiekben az 1989/90-es rendszerváltozás emlékezetkultúrájának szépirodalmi megjelenítésének kérdéskörét kívánom végigfuttatni a kortárs női magyar és lengyel irodalom szövegtestén, hogy egy közös metszetet találjak.

Kulcsszavak: rendszerváltozás, kortárs irodalom, lengyel irodalom, komparatiztika

A metadiszkurzivitás olvasás-etikai vonzatai: a metaleptikus írás sikertelensége és megváltástana J. M. Coetzee Elizabeth Costello című regényében

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Az Elizabeth Costello (2003) egyes fejezeteinek előzményei, már a szerző Ausztráliába való emigrációját megelőzően hangsúlyeltolódásokat jeleznek az írásainak tematikáját és prózapoétikáját illetően. Legyen szó a J. M. Coetzee által, akadémiai környezetben, performansz-jelleggel felolvasott történetekről, vagy a később regénybe foglalt elbeszélésekről; a bennük megjelenő és a szerző szurrogátumaként is értelmezhető címadó fiktív író alakja kulcsfontosságú a metafiktív alapokon szerveződő írásmód és létmód megértéséhez.

A szövegek, miközben együtt és külön-külön is, az irodalom nyújtotta megértés komplex allegóriájaként működnek, egy attól elválaszthatatlan etikai elköteleződést is színre visznek. A hypotextusokban megidézett karkai példázatoság és a metalepszisek által közvetített gondolatiság vizsgálata egy olyan önelemző írásmód működésére mutat rá, amely ellenáll az interpretatív redukcionizmusnak. Ez az ellenállás – a szerzői autoritás folyamatos megvonásaival társulva – a metadiszkurzivitást érintő megfontolások kapcsán is kihívás elé állítja az értelmezőt: fogalmi eszközeinek hatékonysága és csődje egyaránt az olvasásban történő megértés állomásai közötti dinamizmus függvénye. A narratív szintek leírását célzó fogalmi apparátus regény általi kimozdítása együtt jár a főhősnő, Elizabeth Costello, és így a Coetzee által kínált „beágyazódás” és „megtestesülés” etikai-esztétikai tapasztalatának követelményével. A regény metafiktív eljárásaiban megvalósuló epifánia velejárója az olvasói felelősség átértékelése; ugyanakkor annak a tudatosítása is, hogy az alakzattól a fikcióig vezető „út” során végbemenő metamorfózis ontológiai következményeinek megértéséhez ugyanúgy szükség van a rendszerigényű fogalomhasználatra.

Az Elizabeth Costello vizsgálata rámutatott, hogy a bölcséleti és a rétegzetten dialogikus igénnyel szervezett szövegek metaleptikus jellege nemcsak belső viszonyrendszerük, azaz a megidézett etiko-politikai problematikák (állatjogok, posztkoloniális hatalomkritika, az irodalom és a humanitások kortárs helyzete stb.) allegorikus összefűzésében bontakozik ki. A metadiszkurzivitás kérdése így nemcsak a vizsgált szöveg, hanem egyben irodalomelméletre vonatkozó kérdés is, vagyis az értelmezésnek magának is számolnia kell belső diszparitásaival. Mindezt úgy foglalhatjuk össze, hogy Coetzee Elizabeth Costello-jának sikeressége az interpretáció következetességének sikertelenségében és az „értelem” bukásában érhető tetten.

Kulcsszavak: Coetzee, metafiktív, olvasásetika, metalepszis, allegória

Itáliai irodalmi vonatkozások Anna Ahmatova poétikájában utalásokkal Nyikolaj Gumiljov itáliai témájú műveire

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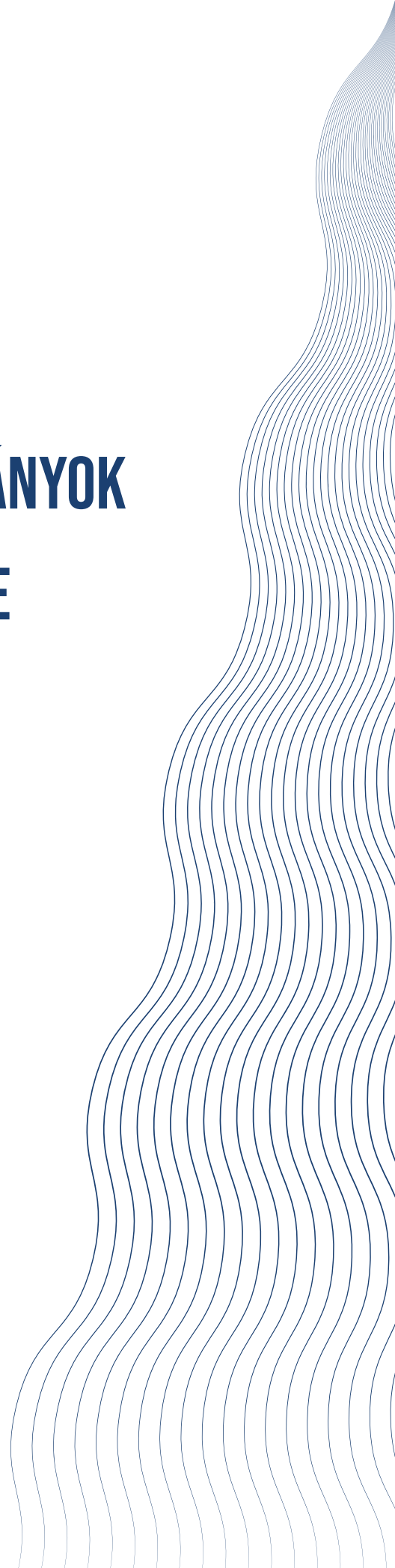
Az itáliai irodalmi vonatkozások vizsgálata tág témát fed le. Alapfeladatomnak tekintem annak feltárását, hogy az utazási élmények és az itáliai irodalom mély ismerete hogyan befolyásolták Anna Ahmatova (1889-1966) költészetét. Mindez többek között tetten érhető a *Velence* című versben, a Firenzében íródott költeményeiben, és a költőnő feljegyzéseiben. Ám az itáliai élmények még inkább megfigyelhetők férje, Nyikolaj Gumiljov (1886-1921) poétikájában, aki egy teljes itáliai témájú versciklust írt. E művek középpontjában a közösen meglátogatott itáliai városok (pl. Genova, Róma, Nápoly, Bologna, Firenze), műemlékek, képzőművészeti alkotások (pl. Leonardo da Vinci és Fra Beato Angelico alkotásai), illetve történelmi személyek, költők (pl. Caracalla, Dante, Gabriele d'Annunzio) állnak. Ezek közül kiemelkedik a *Firenze* című költemény, amelyben említésre kerül Dante Alighieri alakja, ezenkívül a Pokol egyes állataira is találunk utalást. A költőóriás hatása mind Gumiljov, mind pedig Ahmatova költészetéhez egyaránt szorosan kapcsolódik. Erről tanúskodik a költőnő *Dante* című verse. A vers mottója a firenzei keresztelő kápolnára utal, melyben Dantét megkeresztelték: a keresztség, mint a keresztény ember életében alapvető mozzanat kapcsolódik itt össze a szülőváros, illetve szülőháza iránti feltétlen szeretettel. A versben feltárulkozik Ahmatova sajátos (a „hivatalos” dantisztikával nem kimondottan összhangban lévő) Dante-értelmezése is, amely külön elemzést érdemel.

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Kulcsszavak: Itália, Anna Ahmatova, Nyikolaj Gumiljov, Dante Alighieri

KLINIKAI ORVOSTUDOMÁNYOK

CLINICAL MEDICINE



Acute treatment with an estrogen-like compound shows neuroprotective potential and changes the behavior of a triple transgenic mouse model of Alzheimer's disorder

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Introduction: Previous studies in our laboratory demonstrated that 17 β -estradiol (E2) and non-genomic estrogen-like signaling activators (ANGELS) have neuroprotective effect on basal forebrain cholinergic neurons via non-genomic actions in a neurotoxic animal model of Alzheimer's disorder (AD) (1).

Aims: Further confirm the neuroprotective and behaviour-modifying effect of a promising ANGELS compound in a genetic model of AD, the triple transgenic mouse (3xTg-AD).

Methods: The experiment was performed on 6-month-old female 3xTg-AD mice. As a menopause model ovaries were removed (OVX). After two-week recovery an acute subcutaneous (s.c.) injection of vehicle, 33ng/g E2 or an ANGELS compound was administered. Y-Maze and Forced Swim Test (FST) were performed 24 hours after treatment to observe short term memory and mood, respectively. The A β 1-42 plaques, Tau aggregates, choline-acetyltransferase (ChAT) positive cell loss and acetylcholinesterase (AChE) fiber loss in the brain were determined with quantitative immunohistochemistry. To check the possible side effects the uterus was dissected and weighted.

Results: The uterus weight increased significantly after E2 but not after ANGELS treatment. Locomotion parameters in Y-maze increased after both treatments, while time spent with struggling in FST decreased only after ANGELS therapy. The hippocampal, cortical and amygdaloid regions showed the expected pathological hallmarks of AD (A β 1-42 plaques, Tau aggregates). Additionally, significant AChE fiber loss was found in the cortex, which was restored by E2 and the ANGELS, without influencing the ChAT positive cell numbers.

Conclusions: The tested ANGELS proved to lack estrogenic-like side effects in vivo and have protective properties in 3xTg-AD mice on neuroarborization. We believe that these or similar compounds may provide a novel approach in AD therapy.

Acknowledgement: This work was supported by the Hungarian Brain Research Program (KTIA_NAP_13-2014-0001,20017-1.2.1-NKP-2017-00002); OTKA: 112807, and the European Union, the University of Pécs (LJDKÖ2021) and ÚNKP-22-3-II-1574 from the Ministry for Innovation and Technology in Hungary.

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Keywords: Alzheimer's disorder, neuroprotection, estrogen, cholinergic neurons, ANGELS

Second primary cancer in younger adults with head and neck cancer: mutagen sensitivity and other risk factors

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Background: Head and neck cancer patients are at high risk for secondary primary cancer (SPC) development. Mutagen hypersensitivity may be associated with elevated risk of SPC. SPC is a negative predictor of cancer-specific survival.

Aim: To evaluate the mutagen sensitivity phenotype on the risk of second primary cancer (SPC) in patients with head and neck squamous cell carcinoma (HNSCC), and to estimate the long-term rate of SPC and the outcome with SPC.

Methods: A survey was made regarding SPC among 124 younger (≤ 50 years) smoking and drinking adults with HNSCC who were enrolled in a pretreatment mutagen sensitivity investigation during 1996-2006. Mutagen sensitivity was assessed by exposing lymphocytes to bleomycin in vitro and quantifying the bleomycin-induced chromatid breaks per cell (b/c). Patients were classified as hypersensitive (> 1 b/c) or not hypersensitive (≤ 1 b/c).

Results: Mean follow-up time for all patients was 68 months (range: 5-288 months), and the 15-year cancer-specific survival was 15%. Twenty patients (16%) developed a SPC (15-year estimated rate: 41%), and half of them was hypersensitive. The crude rate of SPC for hypersensitive ($n = 65$) or not hypersensitive ($n = 59$) patients were 15 and 17%, respectively ($p = 0.4272$). The 15-year estimated rate of SPC for hypersensitive and not hypersensitive patients was 36 and 48%, respectively ($p = 0.3743$). Gender, UICC stages, anatomical sites of index cancer did not prove to be a significant risk factor for SPC. Forty-five percent of SPC developed after the 10-year follow-up. The 3 year cancer-specific survival was 23% with SPC.

Conclusion: According to our findings, mutagen hypersensitivity was not associated with an increased SPC risk in HNSCC patients. Patients are at a lifelong risk of developing a SPC. Survival with SPC is very poor.

Keywords: Head and neck squamous cell cancer, Mutagen sensitivity, Risk of second primary cancer, Survival with second primary cancer

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Comparing the endovascular treatment of isolated intracranial occlusions and tandem occlusions in acute ischemic stroke

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Introduction: Intracranial mechanical thrombectomy (MT) is considered a standard treatment approach in acute ischemic strokes (AIS) due to isolated large vessel occlusion (LVO) of the anterior circulation. Although the patients with tandem occlusion (TO) (intracranial anterior large vessel and concomitant extracranial internal carotid artery stenosis or occlusion) have been excluded from the major thrombectomy studies due to the greater stroke severity and the technical complexity of endovascular treatment (EVT). Therefore the TO treatment strategy is still unclear. We sought to compare the efficacy and safety of EVT in tandem lesions and in isolated intracranial occlusions (IsO).

Methods: Consecutive patients with anterior LVO who underwent EVT in the participating institutions (Debrecen, Szeged, Pécs) were enrolled in our study. Patients' data were collected from our prospective stroke registry (STAY ALIVE Stroke Registry). Patients were divided into two groups depending TO or IsO occurred. Investigated outcomes were the 90-day functional outcome and 90-day mortality.

Results: A total of 166 patients (age: 69 ± 12 years, 54.8 % female) were enrolled in our study, including 32 (19.6%) TO cases, and 133 (80.1%) patients with IsO. Patients in the IsO group were slightly older (70 ± 12 years vs. 66 ± 9 years, $p = 0.075$), and had a higher prevalence of comorbidities such as atrial fibrillation (46.5% vs. 16.1%, $p < 0.002$). There was no significant difference in the parameters of EVT and in the investigated outcomes, although the distal embolization was higher (29.0% vs. 12.8%, $p=0.026$) in the TO group and we observed a trend towards higher rates of 90-day mortality (29.1% vs. 16.7%, $p=0.053$) in the IsO patient group. After the univariate analysis, the age ($p=0.016$), baseline NIHSS ($p=0.002$) and glucose ($p=0.006$) were associated with the 90-day good functional outcome, and the age ($p=0.009$), glucose ($p=0.047$) and sICH ($p=0.025$) were correlated with the 90-day mortality.

Conclusion: Our results suggest the outcome of the patients with LVO does not primarily depend on the occlusion type or the complex EVT technique of that, though the mortality rate was moderately higher in IsO patients. Furthermore, EVT of tandem lesions is safe and effective and shows a comparable favorable outcome rate to patients with IsO.

Keywords: stroke, thrombectomy, large vessel occlusion

Significance and experimental modeling of neonatal hypothermia

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Introduction and Aim: Newborns, especially preterm infants have a limited ability to maintain their core temperature. Brown adipose tissue starts to develop intensely right before birth and plays a key role in neonatal thermoregulation. In our research, we aimed to investigate the role of brown adipose tissue in protecting the core temperature of newborns and preterm infants by developing and using an animal model.

Methods: Our goal was to develop a new animal model, preceded by extensive literature search. In our preliminary studies, we used 7-day-old Wistar rats as a model for full-term neonates and 2-day-old animals for preterms. Two groups were created at each age: cold-exposed (18°C) and thermally neutral (33°C). Temperature was measured at different points on the body surface of the animals (interscapular area, brain, sacrum) using a thermal imaging camera and thermocouples at the same time.

Results: No significant difference was found between the temperatures of body parts in the thermoneutral environment in the 7-day-old group ($p > 0.05$). In the cold, the interscapular area (localization of brown adipose tissue) had higher temperature ($22.2 \pm 0.1^\circ\text{C}$) than the brain ($21.2 \pm 0.1^\circ\text{C}$) and the torso ($20.4 \pm 0.1^\circ\text{C}$). In 2-day-old animals exposed to cold, the interscapular temperature was also higher ($20.5 \pm 0.1^\circ\text{C}$) than that of the brain ($19.9 \pm 0.1^\circ\text{C}$) and the torso ($19.4 \pm 0.1^\circ\text{C}$). However, the body temperatures in all regions were lower in the 2-day-old than in the 7-day old cold-exposed rats.

Conclusion: Activation of the brown adipose tissue could be detected in our model during cold exposure, which may be suitable for later applied physiological research. The difference between the brown adipose tissue activity of the full-term and preterm model highlights the vulnerability of the premature neonates. Our results may help to understand the thermoregulation of full-term and preterm newborns, thus to prevent their hypothermia.

Keywords: brown adipose tissue, hypothermia, neonatal, thermogenesis, thermoregulation

The importance of vision screening in the elderly in the prevention of hip fractures

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Visual decline in the elderly population is a major cause of falls and traumatic injuries. Mass screening is hardly feasible to be performed by eye professionals. In the current study visual functions using a mobile-based visual acuity (VA) and stereovision (SV) testing system (EuvisionTab®) were compared between patients who suffered a fall-related traumatic hip fracture and age-matched controls.

Altogether 111 elderly participants (mean age: 74.7 yrs., range: 60-96) were examined with the necessary refractive correction. In the control group, we recruited persons at low risk from the point of view of traumatology and ophthalmology while in the study group patient with subsequent traumatic hip fracture were included. For monocular VA 16 Landolt-C optotypes from 5 m were presented on the tablet, and the VA was estimated with Best-PEST algorithm. SV testing was performed by TNO stereotest and EuvisionTab random dot stereogram (from reading distance, by using anaglyphic glasses, with static and dynamic stimuli). The fail-pass criterion for TNO was 240', and for the EuvisionTab stereotests, 6 correct answers out of 10 randomly presented stereo-E optotypes.

The decline of VA correlated with age. In the age group 80-90, there was a significant stepwise decrease in VA compared to the younger age groups (60-79 yrs). The reference value (95% CI) of VA measured by EuvisionTab is -0.26-+0.54 logMAR for the age group 60-79 yrs. Significantly different monocular VA values were found between the study and control groups in both age groups using T-test (at $p < 0.01$). The SV measured by TNO also decreased with age (Chi-square test $P = 0.0473$), while the performance obtained by EuvisionTab showed no significant decay.

In low-risk elderly, a correlation was found between VA and TNO-stereoacuity. Conversely, performance measures by the low-density EuvisionTab stereotests were stable across ages. Regarding stereovision, members of the trauma group performed significantly worse on all stereotype tests than the control group, with the largest difference in the case of the dynamic EuvisionTab stereovision test.

Based on our results, EuvisionTab could be a useful tool to monitor age-related visual changes (i.e. VA and SV) and prevent traumatic injuries in elderly patients. In the study, EuvisionTab tests performed well as a bedside screening method, and since their use does not require an eye specialist, they can also be part of the examination by a nurse.

Keywords: visual acuity, stereovision, hip fracture, fall-related, mobile-based

Evaluation of Nuclear Factor Kappa B (NF- κ B) and Liver Function in Hepatitis Patients and Correlation of NF- κ B with Liver Enzymes

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Introduction: One of the most important and vital organs of the body in humans and vertebrates is the liver, and almost every organ in the body is supported by the liver which is imperative for survival because of its strategic area and multidimensional functions (1). Hepatitis is described as the inflammation of the liver (2–4). It is a world health challenge, highly endemic in South-East Asia and Sub-Saharan Africa where several mortalities and morbidities have been recorded (5). Various inflammatory responses involved during hepatitis and other liver dysfunctions are regulated by nuclear factor kappa-light-chain-enhancer of activated B cells (NF- κ B) (6). Inaccurate and precise regulation of NF- κ B may contribute the development of cancers, inflammatory and autoimmune diseases, and viral infection (7).

Aim of the study: This study was set to evaluate NF- κ B and Liver Function in Hepatitis Patients and Correlation of NF- κ B with Liver Enzymes.

Methods: This study was conducted on 180 subjects comprising of 100 apparently healthy subjects and 80 confirmed hepatitis patients. Ten milliliters (10mls) of venous blood sample were collected from each subject from the ante-cubital vein using sterile disposable needles and syringes. 5mls were immediately dispensed into plain containers for the estimation of NF- κ B and serum proteins while 5mls was dispensed into lithium heparin bottles for the estimation of liver function parameters and qualitative detection of hepatitis antigen/antibody. The samples were analyzed according to the specifications of the methods applicable for each parameter.

Results: The results showed that NF- κ B levels were significantly higher ($p < 0.05$) in hepatitis patients as compared to the controls. Plasma ALT, AST, ALP, and GGT levels were significantly higher ($p < 0.05$) in hepatitis patients when compared to the controls. However, serum levels of total proteins, albumin and globulin levels were significantly lower ($p < 0.05$) in hepatitis patients when compared to the controls. There is a strong positive correlation between NF- κ B, AST and GGT with a negative correlation observed between NF- κ B and ALP.

Conclusion: The plasma/serum levels of NF- κ B, ALT, AST, ALP, GGT and serum proteins of hepatitis patients were significantly altered in hepatitis patients. Also, this study established a positive correlation between NF- κ B and liver enzymes such as ALT, AST and GGT and negative correlation with ALP.

Keywords: NF- κ B, Hepatitis, Liver Enzymes, Inflammation

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KOGNITÍV ÉS EVOLÚCIÓS PSZICHOLÓGIA

COGNITIVE AND EVOLUTIONARY PSYCHOLOGY



A nők színlelt orgazmussal összefüggő szocioszexualitásának és pármegtartási mintázatának feltárása

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Az orgazmus színlelése az egyik legkevésbé kutatott humán szexuális viselkedés, a meglévő kutatások viszont azt mutatják, hogy széles körben elterjedt. A női szexualitás bonyolultabb és éppen ezért kevésbé kutatott területe a tudománynak, az azonban elfogadott, hogy a női orgazmus különféle módokon, de segíti a jó közérzet elérését, a párkapcsolati kötődést és a fogantatást. Mivel a női orgazmus bekövetkezése nem olyan megbízható, mint a férfi, a színleléssel tartják fenn és fokozzák saját és/vagy partnerük szexuális érdeklődését, valamint vágyát; óvják meg a partner önbizalmát; vetnek véget a nemkívánatos aktusnak; manipulálják a partner elköteleződését és növelik a párkapcsolati elégedettség érzését.

A vizsgálat célja a szocioszexualitás és pármegtartási magatartásformák kapcsolatának feltárása a női orgazmusszínleléssel és párkapcsolati elégedettséggel. Összesen 436 női vizsgálati személy töltötte ki a kérdőívcsomagot, amelynek segítségével orgazmusszínlelési szokásaikat, pármegtartási viselkedésüket, párkapcsolati elégedettségüket, szexuális- és szocioszexuális orientációjukat mértük fel.

A független mintás t-próba és Mann-Whitney próbák alapján szignifikáns különbség mutatható ki az orgazmust színlelő és nem színlelő nők között a pármegtartási szokásokat ($t(434)=-1.754$; $p=0.04$), párkapcsolati elégedettséget ($U=15369$; $p<0,001$) és a szocioszexuális orientációt ($U=15664$; $p<0,001$) tekintve is. Ezek a különbségek a független mintás varianciaanalízissel tovább árnyalva a színlelést nem alkalmazó, illetve mindkét helyzetben színlelők között jelennek meg. Továbbá a kapcsolatvizsgálat gyenge negatív összefüggést mutatott a párkapcsolati elégedettség és a színlelés közt ($\rho=-0,233$; $p<0,001$). A változók modellbe való integrálása rámutatott a szocioszexualitás direkt, és a párkapcsolati elégedettség által mediált indirekt hatására a színlelés megjelenésében; továbbá, hogy a pármegtartó viselkedések is hathatnak az orgazmus színlelésére, amely változóra a párkapcsolati elégedettség befolyásoló erővel bír.

Az eredmények szerint az orgazmust színlelő nők több pármegtartó viselkedést mutatnak, mint nem tettető társaik, alacsonyabb azonban párkapcsolati elégedettségük, és korlátlanabb szocioszexualitással jellemezhetőek. A megjátszott orgazmus szignifikáns különbség nélkül ($U=2686$, $p=0.347$) fordul elő hosszú- és rövidtávú kapcsolatokban is, de mégis eltérő motivációval.

Kulcsszavak: színlelt orgazmus, szocioszexualitás, pármegtartás

The Influence of Attentional Performance and Working Memory Capacity on Recall Performance in University Students on a Multimedia Learning Setting

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A core premise behind multimedia learning research is that it seems to be more likely to result in more effective learning than those that are not set accordingly. This empirical study investigates the impact of attentional performance, working memory capacity and the effect of number of multimedia elements on the recall performance of university students in a multimedia learning environment. It is predicted that the performance of individuals will increase as the number of multimedia learning materials increases. Furthermore, the individuals who have better working memory capacity and perform better in the attentional performance test recall more information from the presented subject material. In this study, individuals (N = 41; M = 21.3; SD = 3.02) were introduced to a topic in four different conditions by the same lecturer. After the presentation, post-tests were conducted to assess the recall performance, working memory capacity and attentional performance of the participants. It's important to highlight that a language test was conducted in order to understand their English proficiency. According to our results, there was an effect of the number of multimedia elements on the performance of the participants, more multimedia elements resulted better performance on the post-test. Furthermore, attentional performance and language skills of the individuals influenced the recall performance. This study provided a guidance to educators in the University about the effect of multimedia learning capacities in the purpose of learning.

Keywords: Multimedia Learning, Working Memory, Attentional Performance, Recall Performance

A Tárgyasított Testtudat Kérdőív magyar változata (OBCS-H)

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A tárgyiasított testtudat pszichológiai jellemzőinek kutatása kiemelten fontos terület, hiszen a testükkel kapcsolatban megélt negatív élmények károsan hatnak a nők mindennapi működésére. A nőket jelentős szociokulturális nyomás éri a fizikai megjelenésükkel kapcsolatban. Elvárják tőlük, hogy fizikailag vonzók legyenek, tehát testüket esztétikai gyönyörkeltést szolgáló tárgyként kezeljék. A Tárgyasított Testtudat Kérdőív (Objectified Body Consciousness Scale; OBCS) használatával kimutatható a nők közötti eltérés abban, hogy mennyire hajlamosak tárgyként kezelni a testüket. Akik hajlanak erre, azok nagyobb mértékben internalizálják a fizikai megjelenésükre vonatkozó társadalmi elvárásokat.

Jelen kutatás célja kettős. Egyrészt reflektálunk egy korábbi magyar cikkre, amely a fenti kérdőív validálását helyezte fókuszba, de a miénktől eltérő eredményeket kaptak. Másrészt bemutatjuk, hogy ez a több nyelven is megbízhatóan mérő kérdőív magyarul is jól használható az eredeti faktorokkal, azaz nemzetközi összehasonlításra is alkalmas.

A kutatásban egy online kérdőívcsomagot használtunk, amelyet 770 nő (átlagéletkor 30,1 év; SD = 11,3; minimum = 18 év; maximum = 71 év) töltött ki. A kérdőívcsomag a Tárgyasított Testtudat Kérdőívet (OBCS), a Kozmetikai Műtét Elfogadása Kérdőívet (ACSS) és a Testedzésfüggőség Kérdőívet (EAI) tartalmazta, továbbá felmérte a saját testtel kapcsolatos elégedettség szintjét. A faktorstruktúra vizsgálatához a JASP, míg a validáláshoz a Jamovi programot használtuk.

Eredményeink alapján a Tárgyasított Testtudat Kérdőív magyar változatán is jól működik az eredetileg meghatározott hármasszoros faktorstruktúra, amely a következő: Testfelügyelet, Testszégyen és Kontroll hiedelmek. Az elvárásoknak megfelelően a magasabb fokú tárgyiasítás szignifikánsan együttjár a saját testtel való magasabb elégedetlenséggel, a kozmetikai műtétek iránti nagyobb nyitottsággal, illetve a testedzésfüggőség kialakulásának fokozott veszélyével. Összességében az eredetileg meghatározott faktorstruktúrát alkalmazva a Tárgyasított Testtudat Kérdőív magyar változata (OBCS-H) megfelelőnek bizonyult a nők testükkel kapcsolatos, tárgyiasításhoz fűződő tapasztalatainak mérésében.

Kulcsszavak: tárgyiasítás, testtudat, elégedettség, kérdőív validálás

The influence of executive functions on digital literacy through affective variables

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Information and communication technologies (ICT) have the potential to improve our daily life. ICT devices are used in education, healthcare, and workplaces. Furthermore, they could be protective factors against loneliness, increase perceived well-being and support the maintenance of cognitive abilities. Yet many individuals still lack the digital competencies needed to take advantage of using ICT. Executive functions (EFs) might have an important role in adapting to the continuously changing digital world as they are crucial factors in adapting to new circumstances and acquiring new skills. In addition, EFs might influence the emotional approach toward ICT. Therefore, the aim of our study was to test whether executive functions would predict the level of digital skills via a various set of affective variables. Namely, we measured technostress, openness, and attitude toward ICT. Participants (N=269, M=30), were invited to fill out an online survey and participate in two behavioral tests of cognitive flexibility and executive control. Besides the two tests, the survey included questionnaires on digital competencies, executive functions, and technology-related attitudes and emotions. To test the relationship between the measured variables we used structural equation modeling (SEM). The analysis showed that EFs predicted the level of digital competencies. Computer skills were predicted by self-reported cognitive flexibility via openness toward ICT, while mobile competencies were predicted by both self-reported cognitive flexibility and executive control via technostress, ICT attitude, and openness. Our results provide a few guidelines to create efficient digital literacy trainings. We believe that our study has the potential to support the development of advanced digital skills in the long term.

Keywords: digital literacy, executive functions, information and communication technology, technostress, touchscreen devices

Why do we enjoy fear? - Subjective evaluation of horror movies based on personality traits, emotion regulation, and supernatural beliefs

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Introduction: The popularity of the horror genre in movies has been constantly high for many decades now and it still has not reached its peak yet. As a recreational activity, we can presume that people watch horror movies in pursuit of enjoyment. However, we still do not know what traits make enjoyment possible and what are the key reasons behind the popularity of horror fiction.

Aim: In this study, we aimed to investigate the motives and reasons behind the popularity of horror-related movie materials through the investigation of different personality traits, emotion regulation, and paranormal beliefs associated with the liking of horror movies.

Method: We collected online survey data from multiple university sources and social media groups. Participants (N=593, 74.5% female, 18-76 age range) completed measures of cognitive emotion regulation, sensation seeking, level of paranormal beliefs, morbid curiosity, disgust sensitivity, and movie-watching habits. Then, participants were asked to watch and rate 10 short scenes from horror movies on dimensions of excitement, enjoyment, disgust, scariness, and realness. We used general linear modeling and structural equation modeling to test what are the predictors of horror consumption.

Results: Our results suggest that the extent of higher enjoyment was influenced directly by lower perceived disgust and higher perceived reality. Meanwhile, the extent of higher excitement was influenced directly by how scary the scene was, and the higher level of morbid curiosity of the participants. Our results also show that a higher level of paranormal beliefs, higher level of sensation seeking, and adaptive emotion regulation strategies, increased the level of enjoyment and excitement.

Conclusion: We have been able to build a model that might explain the possible factors that play a role in the excitement and enjoyment of horror films. In addition, our findings can help us understand how fear and pleasure can co-exist in recreational horror.

Keywords: recreational fear, disgust, adaptive emotion regulation, sensation seeking, paranormal belief

Perspective taking: How perspective taking affects your social behaviour
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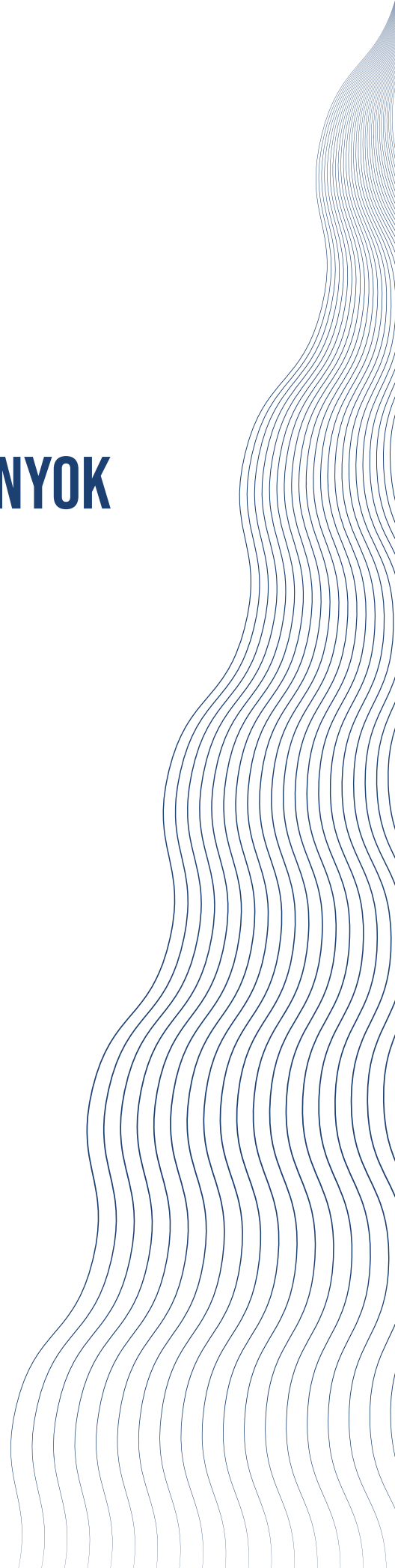
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When you take someone's perspective or put yourself in someone's shoes it might modify your behavior. The main aim of this study is to examine how perspective taking and engagement with other people affect human behavior. While visualizing a situation an individual induces prosocial behaviour and suppresses aggression which leads to increased empathy. We measured the individual empathy Using Toronto Empathy Questionnaire (Spreng,2009). A Total 103 participants between the age of 17-33 years were divided into two groups, experimental group, consisting of 12 participants, watched the movie ("Unbroken") which is with special instructions to visualize the main character's perspective. We found that perspective taking while watching movie increased individuals' empathic abilities compared to the control group. As no visualization was done in control group, they scored less on the questionnaire. It was concluded that when we visualize someone's behavior from their actions or from a narrative situation, which specialized in empathy or changing perspective, is activated and it increases the empathic abilities.

Keywords: Empathy, Perspective taking, Perception of Pain, Emotional cognition

KÖZGAZDASÁGTUDOMÁNYOK

ECONOMICS



The Effect of Supply Chain Management on Organizational Performance in Four Seasons Hotel in Syria

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The purpose of this paper is to investigate the effect of supply chain management on organizational performance in four seasons hotel in Syria. In addition, it aims to assessing the level of awareness and understanding the concepts of supply chain management and organizational performance in the Syrian context.

The research methodology involved the adoption of a survey as a research strategy and quantitative approach, utilized a self-administered questionnaire, to arrive at the major findings of the study. The type of research is a single cross-sectional design in which the collection of data from the respondents was carried out only once. Data was analyzed using the statistical package for social sciences (SPSS).

The paper revealed that there is an effect of supply chain management on organizational performance in four seasons hotel in Syria. It also revealed that there is a high level of awareness among the respondents about the concepts of supply chain management and organizational performance.

As far as the researcher is aware, this paper is the first to investigate the effect of supply chain management on organizational performance in four seasons hotel in Syria; thus its finding will be an original contribution to the field of supply chain management and organizational performance. In addition, as there has been a shortage of research in the field of supply chain management, generally in the Middle East countries, the researcher hopes that this paper will establish a foundation for further research in the region.

Keywords: supply chain, supply chain management (SCM), organizational performance

What is the global impact of the Russian war on stock index listed companies in 2022?

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The Russian Federation's war of aggression against Ukraine has prompted reallocations in equity investments around the world. Shares were sold off in many cases. But there were also companies and sectors that benefited from this crisis.

In this paper, we analyze the differences of the global impact of the Russian war in Ukraine on stock index-listed companies by sectors. To do this, we analyze stock returns and realized volatility over different sectors of the world's major stock indices. With this we would like to answer the following questions: what impact does the Russian war have on the different sectors (e.g., energy, telecommunications, consumer goods, technology) of all considered countries represented by the respective stock index? For example, whether the worldwide impact on the technology sector is greater than on the retail sector. Then we want to find out how this influence differs across different countries. For example, whether the influence on the German technology sector is greater than on the American technology sector.

In our analysis, we found that the Russian war had a negative impact on the tech sector, while the sector for consumer goods has benefited. We also found that over all German sectors was more negatively affected than the corresponding sectors of U.S. American stock indices.

Keywords: Russian war, stock market, realized volatility

Higher educational talent management and the outstanding role of soft skills

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After instituting Bologna system in 2005, Hungarian higher education has been transforming into a new cyclical educational settlement. Earlier, Hungarian higher educational students had the opportunity to be a student through 5 or 6 years, nowadays it could be at least a 3-year-long education. Hence, we may rightfully raise a question; if this amount of time is enough to get proper quality and quantity of higher educational knowledge to cope with labour market challenges. As students realise the shortness of time, they also realise how important it is to develop and get as many skills as they could including hard and soft skills. Having developed soft skills, talent management activities offer a great choice to fulfil this problem.

The aim of this study is to identify and explore the significance of soft skills, especially in the case of those students who are intending to leave university immediately after finishing their bachelor's degree. In order to search for these answers, we distinguished 2 groups; first group is represented by students who are part of talent management, and the other group is represented by those students who decided not to take part in talent management.

Answers could strengthen us about the similarities and differences between the 2 groups and the necessity of university talent management. As we received and analysed our results, we discovered strong connection between the available soft skills of those students who are the participants of higher educational talent management and those who are not.

Additionally, we were attached that there is a significant difference between the soft skills of our different groups.

Keywords: talent management, soft skills

Pricing Strategies in Oligopolistic Market

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Introduction: This study sheds light on the pricing strategies in an oligopolistic market. The study will analyze these strategies and clarify how oligopolistic companies determine the pricing strategy that will be used to price their products and ensure the sustainability of these firms in the dynamic and changing environment in which they exist.

Aim: This study aims to analyze the pricing strategies (the kinked curve model, cartel, price leadership model...etc.) that firms adopt in an oligopolistic market structure and assess the impact of these strategies on the strategic position and profitability of the oligopolistic companies in the market.

Method: The data was traced and analyzed using the literature synthesis method. The articles were discovered using the EBSCO Discovery of Science and Google Scholar Databases after applying limiters, eliminating duplicates, and imposing non-business parameters.

Results: The analysis showed that the competition between firms in an oligopolistic market is not guaranteed; it is up to oligopolistic firms to determine what aims to achieve and what pricing strategy to adopt in pricing their products.

Collusion between oligopolistic firms in a certain industry is considered necessary in determining the pricing policy of the product and services in an oligopolistic market.

It should be mentioned that oligopolistic firms prefer rivalry at non-prices to avoid price wars where there is a competitive exchange between competing firms that reduce their goods' prices in a strategic effort to squeeze each other down and gain a higher market share. This action can be used in the short term to raise sales or as a long-term strategy.

Conclusions: In an Oligopolistic market structure, several pricing strategies are used to set the prices for the products and services like the kinked curve model, cartel, and price leadership model. Oligopoly lies between monopoly and perfect competition. The fewer the number of firms, the more the result appears like a monopoly where the price exceeds the marginal cost, and the quantity is below the efficient level. The greater the number of firms, the more the result appears like the competition where the price equals marginal cost, and the quantity is efficient.

Keywords: oligopoly, oligopolistic market structure, price

A kultúra és az altruizmus kapcsolata a szervezetek döntéshozatali folyamatában

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A tanulmány azt tűzte ki vizsgálatának céljául, hogy két olyan karakteres fogalom közötti kapcsolatot vizsgál meg, amelyek a szervezeti döntéshozatal folyamata során önmagukban is markánsan jelen vannak. A különböző kultúrák a szervezeti döntések elemi részévé váltak, amelyet a vállalatok az országokon – sőt akár kontinenseken – átívelő jól működő gazdasági kapcsolatok érdekében nem hagyhatnak figyelmen kívül. Az altruizmus fogalma legalább olyan mértékben mutatkozik meg a vállalatok döntéseiben, mint a kulturális különbségek. Ezen jellemző ismérvek – amelyek a szervezetek működésébe nélkülözhetetlenül beépültek – alapot adnak arra, hogy a tanulmány e két témakör között koherens kapcsolatot keressen, emellett releváns információkkal szolgáljon a szervezeti döntéshozatal körében felmerülő két fogalmat érintő esetleges kérdésekre. A cikk a kultúra és az altruizmus fogalomra koncentrálnak tekinti át a hazai és nemzetközi szakirodalom egyes elemeit.

Kulcsszavak: altruizmus, vállalati kultúra, döntéshozatal, menedzsment

Examination of the agility and decision-making strategies of managers in Hungarian SME sector based on their risk-taking and innovational potential

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Gaining an advantage in the competitive market over businesses performing similar activities is indispensable. The most important aspects of that are the agility and decision-making strategy of the management. That is why the purpose of the research is to assess the factors influencing the management decisions and strategies of enterprises operating in the Hungarian SME sector, such as willingness to take risks and innovativeness.

The research work consists of two parts, one of them is a secondary research which is a systematic literature review, and the other is primary research. During the primary research, the managers (potential decision-makers) of the companies in SME sector have been asked through online questionnaire about their own management practice. From the results of the research, it is expected to confirm the hypotheses that the decision-making strategies are largely influenced by the managers willingness to take risks and innovational potential. Furthermore, management decisions and thus management performance have an impact on the company's further R&D activities, technological innovations, and financial decisions.

Based on the results, it is expected to be confirmed that the competitiveness of the company depends to the greatest extent on the performance of the management. On the conference, the secondary research will be presented.

Keywords: SME; management decision; management strategy; risk-taking; management performance

What do the greatest say? The influence of public figures on the stock market via social media

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Economists are frequently asked to study the impact of certain economic events on a particular company. The task may seem complex initially, but it can be easily constructed using event study analysis. An event's impact can be measured over time on the value of a company's shares using financial market data.

In this research, the impact of news generated by influential people was investigated using the event study analysis methodology. The usefulness of this kind of study, in addition to market rationality, is that an event's effect is immediately reflected in the share prices. Thus, the economic impact of an event can be measured using the prices of securities observed over a relatively short period. In contrast, studies of direct productivity may require a long period or even several years of observation.

The hypothesis is that the social media interaction of influential and highly reputable individuals associated with a company affects the company's stock prices. More specifically, these individuals can influence the people who observe them so that they make their decisions accordingly by listening to them. Another hypothesis, namely that businesspeople are already reacting to trends, i.e., they have access to certain crumbs of information earlier, so that their manifestations are not accidental. On the contrary, they are consciously causing change, unlike famous people in other fields.

The results suggest that the hypothesis had been confirmed, as all the news analyzed influenced the evolution of share prices, as cumulative abnormal returns were significant in all the cases. The hypothesis that businesspeople react to trends and may have certain information before they do was also confirmed. Among public figures, Elon Musk and Kylie Jenner made the highest cumulative abnormal returns in the pre-window, suggesting that their manifestations are not accidental in time but deliberate.

Keywords: event study, market efficiency, social media

Comparison of the productivity of the Hungarian and German SME sector

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Hungary has been ranked in the bottom third of the European Union's SME-related gross added value and sales revenue per SME. Since Germany has an outstanding place in this ranking and because our country has very strong connection with this country, the aim of the research is to identify the reasons behind the different productivity of Hungarian and German SMEs, i.e. the differences found in the triad of capital, labor and management. The interpretation of deviations and the identification of possible development alternatives are especially important, because they can lead to a step up in the production value chain, which leads to higher profits comparing to assembly. At the conference, the results of secondary research based on foreign and domestic statistics and a literature review will be presented.

Keywords: SME, productivity, value chain, success factors

The inclusion of Islamic financial system and incremental effect on Economic and financial growth: Synthetic Control Group Approach

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The growing popularity of Islamic banking around the globe is phenomenal. The first model of Islamic banking was witnessed in Pakistan in 1950. However, in terms of modern banking, the first full-fledge Islamic bank was established in Egypt in 1963. The evolution from conventional banking system to Islamic banking was not sudden but a paradigm shift. Theoretically, Islamic banks operate in asset-backed and profit and loss sharing concept. Since this change make Islamic banks unique and financially stable, that evidenced back from credit crisis.

This study attempts to analyse the differential impact adoption of Islamic banking model on economic and financial growth. We used Synthetic control group (SCM) approach (an extension of Difference in Differences regression) to measure the incremental effect of Islamic banking on economic growth. We created a synthetic control group of the countries with no Islamic banking. Using weighted average, we equated the economic and financial parameters of synthetic control group with the treatment country i.e., Pakistan. Economic and financial data from 2000 to 2021 is gathered from State Bank of Pakistan. SCM is one of the novel econometric models that attempts to analyse the differential impact of policy change, adoption of new business models, and intervention to the treatment group.

We expect the results to give us insights of significant effect of adoption of Islamic banking on economic growth by comparing growth trend of control group in pre- and post-intervention periods. The results have implication for developing countries and central banks to implement asset backed banking that can contribute to fostering economic growth.

Keywords: profit and loss sharing, economic growth, Difference-In-Differences (DID)

Agriculture Big Data optimization for Small and Medium Enterprises based on a Web Application

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Agriculture is a critical and strategic sector of the Albanian economy, accounting for 17.68% of the gross domestic product (GDP) in 2021. With the increasing population, the development of Agriculture has become priority and an opportunity for national development in Albania. Nonetheless, the sector still lacks the appropriate strategies and technology to track, collect, and organize farm management-related data points. Therefore, the development of appropriate tools for data collection and analysis is a key factor in order to allow data-driven decisions. As Albania prepares for its accession to the European Union (EU), the digitalization of the agriculture sector will become a key factor to remain competitive in the EU markets. Taking on this issue, we developed a real-time web-based application to help managers and researchers keep track of sales, purchases, and product stock in the agricultural sector.

This study presents importance of digitalization in farming knowledge and records management. This web application aims to enable agribusiness actors to make data-driven decisions and facilitate short-term and long-term decisions. Through the application, users can register sales, purchases, add and remove employees, add new products, and see an overview of the products they have in stock. In addition, we have included a feature that provides the user with a quick summary of the daily transactions through comprehensible and easy to generate visualizations. This web-based application was developed in C# and .net framework. The data to build the beta version was collected from small agricultural businesses in Albania.

Keywords: Albania, big data, farm management, Internet of things (IoT), farm records

Peripheral Regions' Convergence towards the Core – Analyzing the Changes of a European Regional Collaboration Network Over Time

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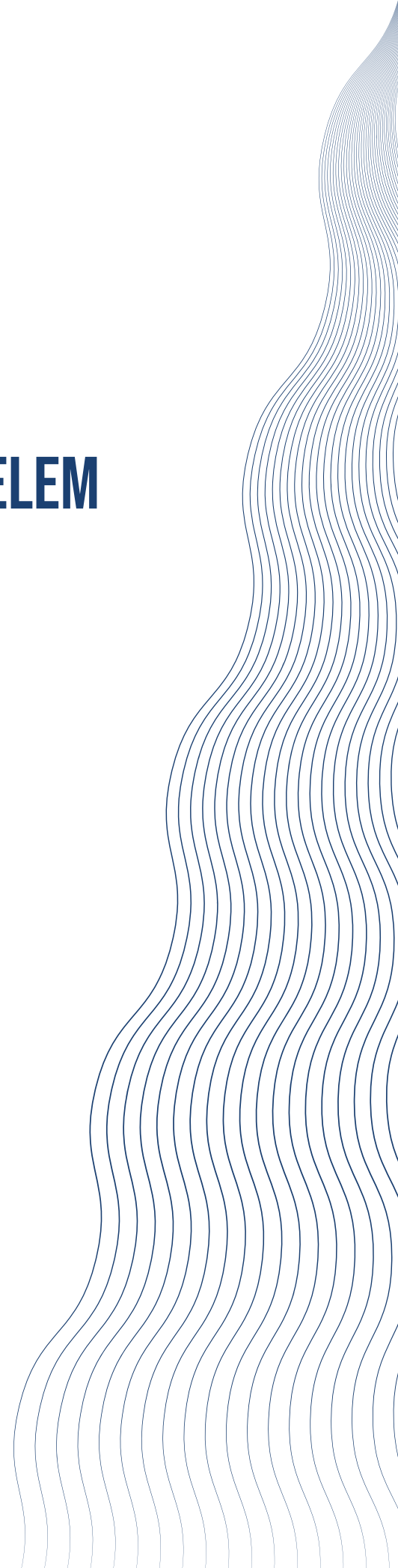
In the landscape of research and development, a main goal for the European Union is to create a competitive European Research Area (ERA), which combines cohesion and research excellence between the member states. Some of the main tools to achieve this are the R&D-focused Framework Programmes (FP). The goal of the current research is to evaluate how well the FPs could contribute to a more cohesive ERA. Using a network core-periphery approach, I analyzed the changes of the level of coreness of the Visegrád countries' regions in the FP network.

Results show that based on multiple different core-periphery measurements, although there are some converging regions, most of the peripheral Visegrád regions could not get closer to the core of the network. On the other hand, some of the previously core regions seem to be pushed out of the core of the network by other, more established western regions. According to these results, the ERA is far from perfect. There are considerable differences in terms of regional network positions between older and newer member states of the EU.

Keywords: core-periphery, lagging regions, European Research Area, knowledge networks, framework programme

MODERNKORI TÖRTÉNELEM

MODERN HISTORY



Heating-energy crisis at schools during the First World War (1917–1918)

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In my presentation, I deal with the energy crisis at Hungarian schools during the second part of the First World War (1917–1918). I am going to talk about the general situation of the energy lack which evolved in Hungary in 1917 due to the army's demand for coal and petroleum. I want to highlight how the general conditions changed at schools as a result of economic crisis, as well as what solutions were developed by schools and higher authorities to solve the existing problem. As a short outlook at the end of my presentation, I would also like to highlight the situation of coal and petroleum supplement during the era of the Hungarian Republic of People and the Hungarian Council Republic (1918–1919).

I used mainly archival documents from the National Hungarian Archives ('Fuel supplement of high schools') in my research, but I relied on printed press, yearbooks (annually published by schools) and relevant literature, too. As I do not only need to talk about the social, but also the economic aspects of the question, I applied industrial reports when doing the research, as well. The practical significance of my research is clear. Firstly, it is related to the topic of my doctoral thesis which deals with the social and educational history of the First World War. Secondly, in the light of historical events, we can possibly prepare for the forthcoming difficulties of energy supplement. In the possession of knowledge, historians may be able to evolve new ideas to help schools in the era of a new energy crisis.

Keywords: energy crisis, energy lack, First World War, history of education, social history

The changing landscape and lifestyle of the Austro-Hungarian border region

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Borders and their social, cultural and economical impact on communities has been the subject of ethnological and anthropological researches from old time onwards. The following thoughts, findings and results formed the cornerstone of my master's thesis in ethnography.

The current state boundary between Austria and Hungary was created in 1920 as the outcome of the Treaty of Trianon. The new boundary line physically rearranged the spatial structure of the neighboring villages. The alteration of the living space led to complex socio-cultural and socio-economical changes among the affected communities. The strictly guarded boundary line made the former connections impossible between the two countries. During the 20th century the Austro-Hungarian state boundary itself has undergone several changes. After the collapse of the Iron Curtain and the regime change in Hungary the physical border between the countries had seemingly disappeared.

During my former research, I've found important relations between the appearance of the new border, the transformation of the landscape and the changing habits of the communities living in the border region. I chose to explore these connections as the subject of my doctoral research. I turned my attention from society based observation to the landscape. The presence of the border not only changed the social structures of the communities but also affected the landscape and the way it was treated by the locals. The aim of my ongoing research is to understand the socio-cultural and socio-economical changes of the Austro-Hungarian border region from the perspective of landscape studies.

My ongoing research is planned to be transborder. I'm going to study a Hungarian village and a neighboring Austrian village in parallel. The settlements sharing the same grape hill which was cut through by the border for decades. The landscape of the two sides developed in significantly different directions. I search for the causes and the results of this difference through the changing landscape. I categorized my research as an intersection of ethnology and environmental humanities hence, I'm using various data from interdisciplinary sources such as history, geography, demography, ecology, ethnography. In my conference talk I would present how this perspective helps to understand the complexity of border regions.

Keywords: border; landscape; society; environment; alteration

The Spanish anarchist guerrilla through the example of Francisco Sabaté (,El Quico')

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The dictatorial rule of General Francisco Franco, who came to power in consequence of his victory in the Spanish Civil War, was met with widespread opposition from within Spain and in the exiled communities from the moment of its birth. Among the opponents of the regime, the anarchists were a dominant force, and their activities were very diverse. These included peaceful and non-violent, although mostly illegal activities from clandestine reorganization of the movement to prisoner aid and the distribution of propaganda publications. But we can also speak about various forms of active armed resistance that complemented and deepened the mentioned methods, ranging from expropriations to political assassinations and guerrilla activities in urban and rural areas.

Francisco Sabaté Llopart (a.k.a. ,El Quico') was probably the most notorious figure of the Spanish anarchist guerrillas, who, alone or with his comrades, carried out a number of courageous and successful actions against the institutions, representatives and supporters of the dictatorship. He remained a constant threat to Franco's Spain until his death in 1960, long after the guerrilla movement had been wiped out. Therefore his death can be seen as a symbolic end to the guerrilla war in Spain.

Results: My research examined the life of Francisco Sabaté and its turning points, examining the material circumstances and ideological driving forces behind his activities. Through an insight into his personality and actions, I have come closer to understanding both the armed anarchist resistance during the Franco era and the theoretical and tactical debates within the Spanish Libertarian Movement (MLE), both at homeland and in exile, which generated a number of tensions. In my view, Sabaté's activity is as well-suited to modelling guerrilla methods as it is for tracing the dictatorship's reactions to them, and thus even to comparing them with guerrilla movements in other regions of the period.

Conclusions: Francisco Sabaté played an important role in the anarchist resistance against Franco's regime, and can be considered the soul of the armed guerrilla struggle. Because of the length of time he was active and the number of actions he carried out, he is well-suited to be analysed as a prototype of the Spanish anarchist guerrilla and, through his actions, to provide a picture of the guerrilla movement as a whole. Sabaté is also relevant as an influence on armed guerrilla fighters in other countries.

Keywords: Spain, anarchist movement, antifrancoist resistance, guerrilla warfare, urban guerrilla

A Munkásőrség Békés megyei parancsnokságának létrehozása és első évei 1957-1960

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Bevezetésként elmondható, hogy az 1956-os forradalmat és szabadságharcot illetve annak szovjet intervenciós csapatokkal történő leverését követően létrejövő új magyar vezetés számára a fegyveres erők feletti rendelkezés fő prioritása vált az első hónapokat követően. Erre az igényre, egy válaszként, 1957-ben a Magyar Szocialista Munkáspárt kezdeményezésére létrehozták és felfegyverezték a Munkásőrség szervezetét. Eme szervezet lényegében az MSZMP fegyveres haderejeként szolgálta a frissen megalakuló állampárt törekvését, a hatalmának megszilárdítására. A volt MDP, vagy friss MSZMP párttagokkal újonnan alakult szervezet első évei nem csak a fegyveres erő biztosításáról, hanem az útkeresésről és a friss szervezet megszilárdulásáról szólt. Előadásom célkitűzése, hogy elsősorban a Békés megyei Munkásőrség Megyei Parancsnokságának létrehozásának folyamatát, jellemzőit, illetve az azt követő időszakot szemléltessem, jellemezzem. Továbbá nem csak a létrehozás körülményeinek bemutatása, hanem ezen szervezet útkeresései, együttműködései, illetve tevékenységének ismertetése is részét képezi a prezentációnak. Módszertani megközelítésem a téma kutatása során elsősorban az MNL Békés megyei Levéltárában fellelhető, a munkásőrség által keletkeztetett iratanyagokra támaszkodik. Elsősorban ezek elemzésére és információtartalmuk szakirodalommal való összevetésére törekszem. Doktori témám kutatása során nem csak a szervezeti működést, hanem a Békés megyei Munkásőrség kapcsolatait, tevékenységét, és a helyi lakossággal folytatott interakcióit is figyelembe veszem.

Kulcsszavak: Munkásőrség, Békés, megye, létrehozás.

„...in the late night hours a big black official state car parked in front of my house.” – The establishment of rationing system in Hungary in 1951 through the eyes of a civil servant

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Rationing system was established in Hungary in 1941, during the Second World War to ensure the sustenance of the population. As a result of the massive economical damage, rationing system worked even after the end of the war, until 1949. After the complete communist takeover, the Rákosi-era has started the transformation of the whole Hungarian economy (e.g. collectivization of agriculture, forced industrialization). The result of this process was that the agricultural production was inefficient to provide adequate amount of food.

In 1950 the economical advisors were trying to convince the Party to establish the rationing system once again, and it took them almost a year to achieve that. In the end, the propaganda communicated it to the people as the rationing system was a proper tool to have a more fairly distribution of goods.

In this paper I intend to use the memoir of Béla Gámenczy, dr., (a civil servant of Budapest, specialized in rationing system and food supply) to show the work behind the whole procedure, as he was part of the team that had to work out every detail – in secret. Alongside the answering to „Why?” and „How?”, I want to show the political mechanism of the Rákosi-era.

Keywords: rationing system, Rákosi-era, economy, memoir, political mechanism

„...in the room of the former Chamber, the Independent Union of Hungarian Theatre Workers has been formed, which brings together the theatrical workers purely on the basis of representation of interest...” – Ideological battle for the theatrical workers

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In this paper I intend to compare two political institute from the first half of the twentieth century. Both of them were decisive in the artistic – especially theatrical – life of the era. The Hungarian Theatre And Film Chamber was formed in 1939 with the leadership of Ferenc Kiss, who had been the government commissioner of films at the time and he later became the director of the National Theatre too. The Hungarian Theatre And Film Chamber described itself as a labour organization, but actually it intended to transform the whole hungarian theatrical scene on religious, racial and christian-national principles. Furthermore the institute was crucial in the politics of theatre leadership which determined the theatricals during WWII.

In 1945 the reconstruction of the country has begun and the theatres in Budapest and in the countryside received new, leftist leaderships. The main goal was to Sovietize the theatricals and in the long run to make a Soviet-like society. The process was led by the Independent Union of Hungarian Theatre Workers, which members were active in leftist movements.

Both institute – the Hungarian Theatre and Film Chamber and the Independent Union of Hungarian Theatre Workers – selected the theatrical workers by ideological aspects to create a community of artists. In this research I aim to compare the two institute to find out their effect on the theatricals and what values they could convey to the audience. I will analyse the members for background, religion and gender, and their mentions in the press when they were excluded from the institutes. I use archival, visual and audiovisual sources, just as ego-documents, like diaries and memoirs.

Keywords: theatre, ideology, politics, christian-nationalism, socialism

Conflicts between the citizens of Pécs and the university students of Elizabeth University in the interwar period

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The first aim of my lecture is to present the main problems and disagreements between the adult population of Pécs and the youth which were emerged in the interwar period. The relevance of this topic is given by that this historical investigation except a few works is completely missing from the Hungarian literature. Andor Ladányi examined the 1920s and 1930s years' universities from the perspective of the realization and the goals of the higher education policy. András Rozs, András Szécsényi, Gábor Ujváry and Róbert Kerepeszki dealt with the ideology of the youth organizations and their anti-Semitic and revisionist movements, so their articles put the focus on the politically motivated conflicts between university youth and citizens. As a result of it the analysis of other types of disagreements has been pushed into the background. However, next to the anti-Semitic activities various interactional relationships and several conflicts were created between students and city dwellers.

With my work, I want to connect to studies that have been of particular interest in the international university history research in recent years. The popularity of this field is indicated by the ever-expanding literature on the topic of „town and gown”. For the Hungarian university history writing the application of this methodological and theoretical approach is less observable which rather pays attention to institutional history studies.

During my lecture I am going to demonstrate students' political movements which are connected to the anti-Semitism, revisionism, turning towards the solution of social issues and anti-Germanism. These kinds of activities frequently did not remain within the walls of the university of Pécs because during these occasions the students often applied the street as political weapon. Furthermore, besides the damaging of public buildings as a consequence of the university students' special life situation and the forms of their activities during their everyday life the youth got into an intensive relationship with the city dwellers which could result in other types of conflicts. For instance, the adult citizens may have resented the impolite and tactless behaviour of the students during the common using of public transportation or as the consequence of their active night life.

Keywords: political movements, town and gowns, generation gap, youth associations, impolite behaviour

The development of the Levente Movement at the local level until the first Levente competition in Baranya County (1921-1926)

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In the years between 1921 and 1945, the Levente Movement, the first Hungarian state youth education organisation of a compulsory nature, was integrated into the everyday life of Hungarian society. In the first years of its existence, thousands of local Levente groups were established, until the organisation was established in every municipality and thus in the whole country. Weekly sessions, flag ceremonies, national holidays, summer camps and competitions in various sports framed the (boys') out-of-school life. Few documents have survived about the Horthy-era youth education organisation and its major public events, such as the Levente competitions.

The source material (both written and pictorial) in the collection of the Janus Pannonius Museum reveals the events of the first Levente competition in Baranya County, which was held in Pécs on 5 September 1926. In addition, the photos are supplemented by reports from the local and Levente press. This event was one of the highlights of the post-war period and attracted the interest of the population. The aim of my study is to describe the early stages of the local development of the Levente Movement, in terms of the organisation of competitions.

Results: Many of the young people from the countryside who came to this event were visiting the city for the first time. Subsequently, the county championships were held annually throughout the country.

My study, which is based on public collection sources, will contribute to the historical aspects of the development of the Levente Movement at the regional level. One of the highlights of this process, the first county Levente competition, will be discussed in more detail. This will also provide an insight into this new type of social event that developed during this period.

Conclusion: The results of my research show that the Levente Movement of the 1920s had substantially different objectives from those of the later years, in the run-up to the Second World War. In the initial period, sport and physical education were a priority in the training of young people. In addition, the Levente competitions, especially the annual county-level ones, were also used to generate public sympathy for the organisation.

Keywords: Levente Movement, youth education, competition, sport, Baranya

MOLEKULÁRIS ORVOSTUDOMÁNYOK

MOLECULAR MEDICINE



PACAP contributes to the maintenance of endotoxin fever through the regulation of pyrogenic cytokines and cyclooxygenase-2

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Introduction and Aim: Pituitary adenylate cyclase-activating polipeptide (PACAP) signaling is involved in various inflammatory processes. A common manifestation of systemic inflammation is fever, which is usually induced in animal models with the administration of bacterial lipopolysaccharide (LPS). A role for PACAP signaling was suggested in LPS-induced fever, but the underlying mechanisms of how PACAP contributes to febrile response have remained unclarified.

Methods: We administered LPS (120 µg/kg, intraperitoneally) to mice with the Pacap gene, i.e., the gene encoding the PACAP protein, either present (Pacap^{+/+}) (n=15) or absent (Pacap^{-/-}) (n=14) and measured their thermoregulatory responses, serum cytokine levels, and tissue cyclooxygenase-2 (COX-2) expression.

Results: We found that the LPS-induced febrile response was attenuated in Pacap^{-/-} mice compared to their Pacap^{+/+} littermates starting from ~120 min postinfusion. Administration of LPS resulted in amplification of COX-2 mRNA expression in the lungs, liver, and brain of the mice in both genotypes at 210 min postinfusion. In the LPS-treated groups, the upregulation of the COX-2 mRNA in Pacap^{-/-} mice was significantly attenuated in the liver, whereas it was augmented in the lungs and the brain compared to Pacap^{+/+} mice. Serum concentration of the pyrogenic cytokines interleukin (IL)-1α and β were significantly increased in Pacap^{+/+} mice in response to LPS compared with saline, whereas the change was not significant between the treatment groups in Pacap^{-/-} mice. In case of IL-1α and β, the intergenotype difference between the LPS-treated groups was also significant. The serum concentrations of IL-6, IL-10, and TNFα were higher in LPS-treated than in saline-treated mice of both genotypes, however, the rise in IL-10 was significantly attenuated in Pacap^{-/-} mice compared to Pacap^{+/+} mice.

Conclusion: PACAP signaling is necessary for normal fever maintenance. Our results suggest that PACAP contributes to the later phases of LPS-induced fever by modulation of COX-2 protein expression in the periphery and the brain, as well as by augmentation of pyrogenic cytokine levels in the circulation. These findings advance the understanding of the crosstalk between PACAP signaling and the “cytokine-COX-2” axis in systemic inflammation, thereby open up the possibilities for new therapeutic approaches.

Keywords: PACAP, thermoregulation, COX-2

The protective effects of PACAP1-38 on the retinal vasculature and hypoxic molecules in rat glaucoma model

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Introduction: Despite the critical impact of glaucoma on blindness, its cause is not fully understood. Animal models are important for better understanding the mechanism behind this disease. Elevated intraocular pressure (IOP) is a risk factor for glaucoma. In our previous study, we described an inducible, microbeads model in Sprague Dawley (SD) rat in which we were able to prove the neuroprotective effects of PACAP1-38 eye drops treatment. Vascular factors have been suggested to play an important role in the development of glaucoma, based on numerous studies.

Aim: In our present study, our aim was to examine the possible protective effects of PACAP1-38 eye drops on the retinal vasculature and the molecular patterns of hypoxia in hypertensive glaucoma model.

Methods: We induced hypertension through injection of polystyrene microbeads into the anterior chamber of SD rats, PBS receiving rats served as controls. Intraocular pressure was recorded every two weeks. We assessed retinal degeneration, vascular and molecular changes through immunofluorescence. HIF1 α A protein level was also measured by western-blot.

Results: Significantly increased IOP was observed in the glaucomatous vehicle-treated group (Beads+S) however, in the PACAP1-38 treated group (Beads+P) the IOP remained in a normal range. Optical coherence tomography images suggested severe retinal degeneration in the glaucomatous group, although protective effects were measured after topical administration of PACAP1-38. We also found several vascular parameters changed in the Beads+S group. The examination of molecular patterns suggested hypoxic conditions in the Beads+S group, however after PACAP1-38 administration retinoprotective effects were observed in HIF1 α protein level.

Conclusions: Our results show that PACAP1-38, given in form of eye drops, is retinoprotective in glaucoma, providing the basis for potential future therapeutic administration.

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Keywords: retina, glaucoma, PACAP, neuroprotection, rat

Investigating biomarkers connected to immune-checkpoint blockade-resistance in patients with melanoma

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Introduction: The availability of immune-checkpoint inhibitors (ICI) in the last decade has resulted in a paradigm shift in oncology. Patients can be treated either by anti-CTLA-4, anti-PD-1, or anti-PD-L1. To maximize the clinical benefit of cancer immunotherapy, the prediction of the actual immune response by the identification and application of clinically useful biomarkers will be required.

Aims: Our goal was to identify predictive biomarkers of immunotherapy - in particular immune-checkpoint inhibitors - in silico. By identifying such biomarkers among non-responding patients to immunotherapy, one could utilize them as predictive biomarkers, and even as potentially druggable targets.

Methods: We searched publicly available datasets for transcriptomic and clinical response data gained from patients treated with anti-PD-1, anti-PD-L1, or anti-CTLA-4. Duplicate records, cell lines, immune cells, non-tumor, scRNA-Seq and non-human samples were excluded from the final analysis. We used unpaired Wilcoxon-test and ROC for statistical analysis. Bonferroni correction was used to screen for the best candidate genes.

Result: We screened 246 datasets. Our final database contains 20 datasets with 2,159 samples from 1,688 patients. From the 1,290 melanoma cases (n=720 blood, and n=570 tissue), 501 samples were treated with anti-PD-1. We found that YAP1 (pBonferroni= 3,22E-05, FC= 2,20), SPIN1 (pBonferroni= 1,15E-08, FC= 1,70), EIF4H (pBonferroni= 2,92E-07, FC= 1,69), SLC25A36 (pBonferroni= 1,07E-06, FC= 1,73), ACER3 (pBonferroni= 4,47E-06, FC= 1,54), LYPLA1 (pBonferroni= 4,46E-06, FC= 1,64), KDSR (pBonferroni= 2,11E-06, FC= 1,53) had the highest potential to predict resistance in patients. YAP1 was the only one of these genes, which can be inhibited by a clinically available drug (Verteporfin).

Conclusion: We established a database capable of exploring and validating biomarkers in cancer patients treated with immune-checkpoint inhibitors. Regarding the fact that YAP1 plays a role in cancer progression, it could be a promising candidate in melanoma to potentiate the effects of a-PD-1 treatment. Ex vivo and in vivo studies are currently under progress.

Keywords: cancer, melanoma, immunotherapy, biomarker

A new potential therapeutic target in inflammatory retinopathy

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Introduction: Retinal inflammation may lead to visual impairment, even blindness in most severe cases. The disease is triggered by bacteria, viruses, fungi, or systemic autoimmune problems.

Pituitary adenylate cyclase activating polypeptide (PACAP) is a neuropeptide, which has strong neuroprotective and general cytoprotective effects. It can also be found in the eye and it is involved in several ocular processes. It is protective in diabetic-, ischemic retinopathies, in retinopathy of prematurity, in glaucoma, in age-related macular degeneration and in case of corneal damage. Three receptors can be distinguished, however the specific PAC1 receptor plays the key role in its well-known protective mechanisms.

Aim: Our aim is to investigate the effectiveness of a specific, exogenous PAC1 receptor agonist agent, maxadilan, in inflammatory retinopathy.

Methods: Inflammation was induced by bacterial lipopolysaccharide in rats. Maxadilan was administered by intravitreal injection. Optical coherence tomography was used to follow the changes in thickness of all retinal layers. Electroretinography provides information on the functionality of photoreceptor, bipolar and horizontal cells. Expression level of forty different types of cytokines was also analyzed.

Results: Our data show that maxadilan is able to prevent the decrease of all retinal layers in inflammatory retinopathy. In addition, it improves the functional outcome. The PAC1 receptor-mediated signaling pathways influence the level of several cytokines and chemokines, such as MIG, MIP2, G-CSF, KC, IL1-alpha, C5/C5a.

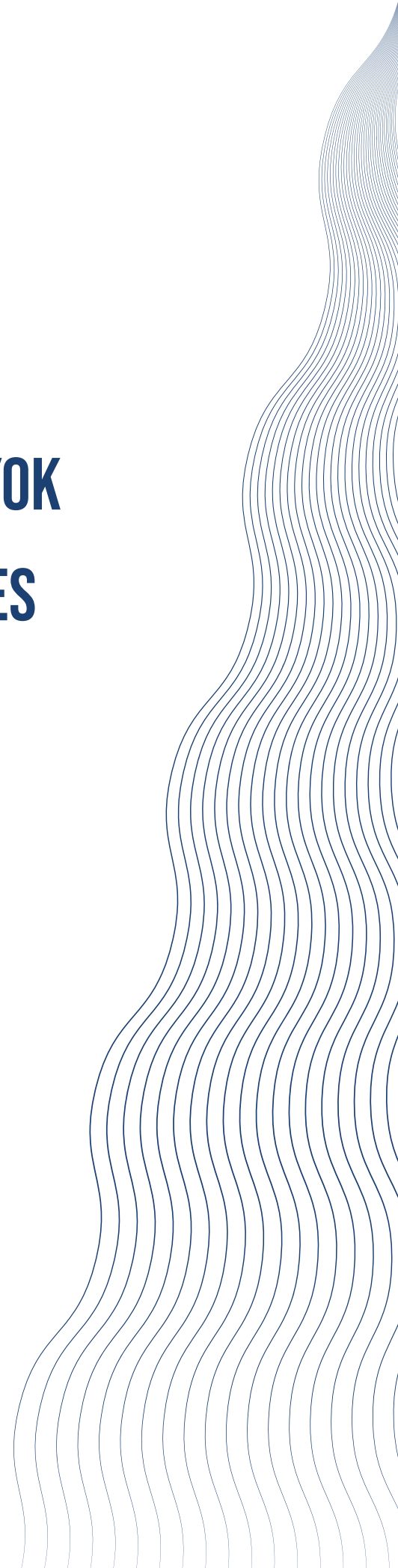
Conclusions: The specific, exogenous PAC1 receptor agonist maxadilan prevents the morphological and functional damage in inflammatory retinopathy. Based on our results PAC1 receptor is a new possible therapeutic target in this disease.

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Keywords: inflammatory retinopathy, PACAP, PAC1 receptor

MŰSZAKI TUDOMÁNYOK

TECHNICAL SCIENCES



Moiré Fringe Segmentation Tool: a Software-based Prototype for Detection of Moiré Fringes of Scoliotic Spines

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INTRODUCTION

Moiré topography (MT) is based on optical phenomena by which moiré images (MIs) are created, comprising alternating bright and dark fringes. The pattern formed by moiré fringes (MFs) on the surface of an object is appropriate for surface analysis. In 1970, MT was proposed for examining the human body. The primary advantages of MT are that it is non-invasive and non-ionizing, fast, portable and cost-effective. MT is used for detection of early stages of scoliosis and different deformities of the spine. However, further research is required for unambiguous interpretations of the topograms.

OBJECTIVES

For reducing uncertainties in MF analysis, an accurate segmentation of MFs is essential. For segmenting MIs produced by projection moiré technique and XOR-logic, the prototype of Moiré Fringe Segmentation Tool (MFST) was developed.

METHODS

MFST follows a manual/semi-automatic concept for MF detection, and its key functions are designed by filtering and morphologic image processing operations (FMIPO). The graphic user interface (GUI) of MFST consist of (1) field of FMIPO, (2) button bar for built-in algorithms for supporting manual delineation, (3) panel for previewing image processing phases and (4) standard buttons. FMIPO covers adjustable parameters for brightness, contrast, thresholding, 2-D Gaussian blur and skeletonization.

RESULTS

MFST allows a responsive and convenient processing configuration on MIs created with XOR logic. The segmenting method is simple, fast to process and, for the most part of the MIs, makes an accurate segmentation possible. The GUI of MFST consists of four main areas: (1) image canvases for original reference and processed image, (2) image processing toolbar, (3) toolbar for displaying skeletonized results and (4) built-in automatic segmenting algorithms. Despite the rather narrow set of FMIPOs, MFST still allows for a visually traceable and relatively accurate contouring that may even be used for specific measurements.

DISCUSSION

FMIPOs—although they make adaptive segmentation possible—can lead to data loss, and thereby to inaccurate and sporadic contours. Possible ways of improving MFST is to extend its functions with operations such as (1) dilation for expanding the boundaries of pixels, (2) high-pass filters for image sharpening, (3) adaptive thresholding with local mean and global mean values.

Keywords: moiré topography, moiré patterns, computer-assisted image processing, software, scoliosis

COMPARISON BETWEEN THE LINEAR AND SIMPLIFIED NONLINEAR STATIC ANALYSIS - ACCURACY AND VARIATION

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INTRODUCTION:

The Annex B of Eurocode 8 introduces the simplified way for determination of the acceptable structure's target displacement for Nonlinear Static (Pushover) Analysis. The approach has been adopted from the N2 method that is developed at the University of Ljubljana.

For a long time, structural engineers have thrived to predict accurate structural behaviours in the event of any type of external excitation. After decades of research and with the help of powerful computers, engineers nowadays can estimate structural behavior quite accurate for various types of anticipated seismic hazard. But these methods require sophisticated computer models and require a lot of time to retrieve results. In this scenario practicing engineers require simplified but still accurate procedures that can predict structural behavior more accurately than the Linear Static Procedures does and as precise as more advanced methods without involving intensive computational modelling and analysis time. The N2 method is one of the procedures adopted by Eurocode 8 that fulfils this requirement.

AIM:

This paper includes the study of Nonlinear Static (Pushover) Analysis as inscribed in Eurocode 8 on a three-storey building and its comparison with linear static procedures. Moreover, the study also covers the comparisons of results of 3D models with more simplified 2D models for Nonlinear Static (Pushover) Analysis, which will help us to understand the importance of how respective linear and non-linear analysis can deduce the desired level of accuracy in the evaluation of the performance point of the structure. The performance point already obtained from the model building is used as a benchmark for the evaluation of the analysis procedures. The N2 method has proven reasonably accurate in the evaluation of performance point of structure as compared to sophisticated modelling efforts utilized.

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Keywords: Performance Point, Eurocode 8, Pushover Analysis, Non-Linear Model, Linear Static Procedures

Increasing and testing the filtration efficiency of masks using a laboratory-built electrospinning device

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In 2019, Covid-19 pandemic appeared and affected the health of humanity. The virus can spread between people in various ways, but mostly from infected liquid particles. A fundamental method of defense is the use of a face mask in public, however, the efficiency of wearing a mask can be influenced by a number of factors. Most of the masks have a classification based on its filtration efficiency. There are three categories, the FFP1, FFP2 and FFP3. All the 3 types can filter particles down to the size of 0.6 micrometer, but the FFP1's efficiency is 80%, the FFP2's 94%, while the FFP3's reaches 99%. The problem is that the commonly used textile masks do not have a classification, which means that these cannot protect the wearer from being infected.

The aim of my research is to solve this problem by using a high-voltage nanofiber forming device based on electrospinning technology. COMSOL simulation is used to test several cases of a model, examining different parameters to find the optimal setup. Such test parameters include the number of needles and their distance from each other. For measurements with several needles, the positioning is mainly based on the distribution of the electric field and the influence of each needle on the other. This step provides the equipment to create a mask-size, uniform layer of nanofibres with high filter efficiency, which can be tested in the laboratory. Other important parameters that can be obtained during testing are the solution concentration, the electrode distance and the voltage level. My goal is to create a mask consisting of a textile fabric and a polyamide nanofiber layer applied to it, which can be measured to have better filtering properties than masks made of textile material only.”

Keywords: elektrosztatika, nagyfeszültség, energetika, nanoszálak, szűrőképesség

THE STRAIN SENSING PROPERTIES OF CARBON NANOTUBES FILLED CEMENT COMPOSITES - RECENT DEVELOPMENTS

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INTRODUCTION:

Since the last century, there is an unprecedented increase in infrastructure especially buildings, industries, motorways, and rural roads. Tons of concrete are being utilized daily in various infrastructures to meet the demands of increasingly sophisticated complex needs by various organizations to facilitate the needs of local markets. To meet such needs, various admixtures are being utilized to meet the various demands. Earlier it was usual practice to mix macro ingredients as admixture, but with the advancements, the engineers started to use micro-sized admixture to get better results. Nowadays nanomaterials are used to enhance the structural properties of concrete at a basic level. Carbon nanotubes (CNTs) are one of the most popular nanomaterials that enhance numerous properties of concrete i.e electrical conductivity, strain sensing, thermal conduction etc.

BACKGROUND:

Carbon nanotubes (CNTs) possess extraordinary multifunctional characteristics like mechanical and physical properties. CNTs can be used in concrete as effective reinforcement if proper diffusion or dispersion and enough interfacial adhesion between carbon nanotubes (CNTs) and cement matrix are ensured. This report consists of a basic overview of carbon nanotubes (CNTs) properties and their electrical properties, especially in strain sensing (that means a structure may sense its situation). Such properties are related to civil infrastructure, electrical equipment, lighting, etc.

RESULTS:

This study summarizes the strain sensing or piezoresistive property of the carbon nanotubes (CNTs) and cement composite to investigate its viability as an implanted stress sensor for civil structures such as roadways, levees and bridges. Various studies can be summarized that the electrical resistance of the carbon nanotubes (CNTs) and cement composite varies with the change in compressive stresses, indicating the capability of utilizing the carbon nanotubes (CNTs) and cement composite as a stress sensor for civil structures.

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Keywords: Carbon Nanotubes (CNTs), Nanomaterial, Strain Sensing, Piezo-resistivity

Stabilization of 2D Impact Problems using Viscous Damping

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Introduction

The effective modeling of impacts has a great importance in mechanical simulations. For solving impact problems, the finite element method is applied in most cases. The main difficulties are the oscillations emerging due to the spatial discretization. These spurious oscillations can induce divergence in the contact algorithm.

Aim

The main goal of the research is the best possible elimination of the spurious oscillations while maintaining as much accuracy as possible. The performance of the solution method is also a major aspect, as simulations with large models are computationally expensive.

Method

In order to eliminate the oscillations, a damping effect must be included in the solution. One possible approach is the numerical damping contained in the algorithm [1]. In the proposed method, a viscous damping is applied in the finite element model with a certain shape of progressive damping characteristics. Combining this with the central difference method, the desired damping character can be determined directly by the damping matrix.

Results

The proposed method has been tested in both 1D and 2D test examples where an elastic rod is colliding with a rigid wall. The resulting time evolution of the velocity and the contact pressure are compared to the results of several widely used numerical methods, like the Newmark [1] and the bulk viscosity [2] methods. In the comparison, the proposed method provides a 3% more accurate solution with 6% less oscillations at least than any of the considered methods by identical circumstances.

Conclusion

The proposed method proved to be effective for the examined 1D and 2D test examples. Thus, it is expected to be useful for more complicated models too. Finding the appropriate damping character has a great importance to achieve these beneficial results. The concrete shape of the damping curve and the detailed results will be shown in the presentation.

Acknowledgements

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- [1] Newmark N M: A method of computation for structural dynamics. Journal of the engineering mechanics division 85.3 (1959): 67-94.
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Keywords: contact, impact, viscous damping, oscillation, wave propagation

Impact analysis of household-scale energy storage on the distribution network

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The implementation of the Clean Energy Package has led to the emergence of several market and aggregator platforms in several European countries, where flexibility service providers and aggregators mainly sell services such as balancing, congestion management and voltage control to the transmission system operator, as well as to the distribution system operator. [1] These services are required due to the increasing amount and decentralised location of renewable energy sources in the distribution network.

In this research, I simulated household-scale energy storage as a flexibility service provider, to see what impact they can have on specific grid points in terms of their location, and whether their efficiency can be increased by becoming more dense and distributed. I seek to answer the question: are household-scale services efficient compared to centralised flexibility units located close to metering points, and how much should they be promoted in the future?

In addition, I have examined the accounting systems used for household-scale small power plants in Europe and the price environment in which household-scale storage is proving profitable, with a particular focus on the optimal environment for the deployment of storage after net metering in Hungary.

[1] Valarezo, O.; Gómez, T.; Chaves-Avila, J.P.; Lind, L.; Correa, M.; Ulrich Ziegler, D.; Escobar, R. Analysis of New Flexibility Market Models in Europe. *Energies* 2021, 14, 3521. <https://doi.org/10.3390/en14123521>”

Keywords: Energy storage, Distribution network, Flexibility, Congestion management, Voltage control

Moving an n-jointed robot arm in plane without using a Jacobian matrix

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Introduction

In robot arm control programming tasks, there are several solutions when only the target to be reached by the arm and the starting geometry of the arm are known. To solve the problem, inverse kinematic calculations are usually performed, which have several limitations. In the inverse kinematics tasks, the robot's Jacobi matrix is used as a basis, which can go into a singular state during the movement, so further calculations are not possible without a new instrumental detection of the geometry of the arm. In addition, the process never provides the correct solution of the task, only an approximate result, which can be refined with multiple iterations.

Objective

In our previous research, we analyzed the purely geometric possibilities of robotic arm movement tasks instead of the inverse kinematics solution. We manage to create an arm moving algorithm consisting of 2 and 3 joints both in plane and space, but moving the robot with more joints required further research. In this presentation, we present the movement of a robotic arm consisting of more than 3 joints in a plane.

Method

Taking into account three engineering indicators, we developed an algorithm that works only from the intersection points of the circles formed by the joints, which can calculate the possible states of the robot arm in order to reach a predetermined target, without any calculation errors.

Results

The algorithm does not iteratively calculate the end states necessary to reach the target, and in addition, unlike the Jacobian matrix solution, it provides accurate results, the only limitation of the accuracy is the accuracy of our used instruments. In our solution, adding new joints to the system means a linear calculation increase.

Conclusion

The fast and accurate calculation makes the algorithm suitable for use on hardware with low computing capacity, such as smart prostheses. Another advantage is that in cases where the movement of the robot arm is not performed by a servomotor, and because of this the jerk of the movement (the derivative of the acceleration) is large, the movement can be predicted with previous simulation without the emulation time being significant. This makes the algorithm especially suitable for arm movements with, for example, an electroactive polymer or an artificial muscle produced in another way."

Keywords: robotic arm control, movement calculation, movement analyzes, kinematics

Legkisebb megközelítési távolság meghatározásának lehetőségei FAM során**Csótai Enikő¹, Dr. Göcsei Gábor²**¹ BSc hallgató, Budapesti Műszaki és Gazdaságtudományi Egyetem, Villamos Energetika Tanszék² egyetemi docens, Budapest Műszaki és Gazdaságtudományi Egyetem, Villamos Energetika TanszékElső szerző/ előadó e-mail címe: ecsotai@gmail.com

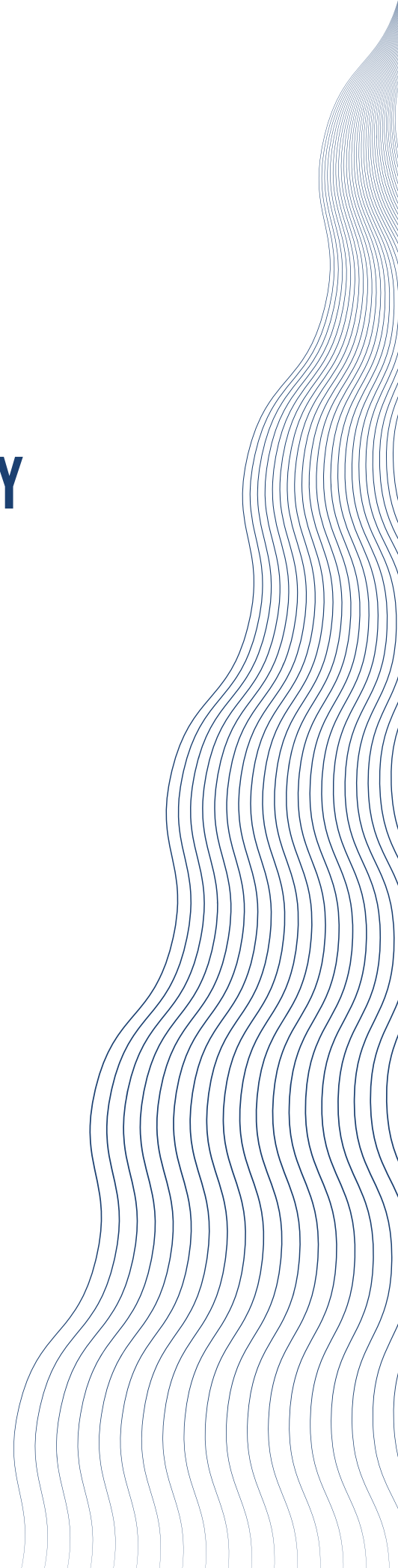
A villamosenergia-átviteli hálózat teljes mértékű kihasználtsága kulcsfontosságú napjaink növekvő energiaigényének kielégítéséhez. A tervezett üzemidőt azonban a rendszeres karbantartás és szerelési munkálatok akadályozhatják. Ahhoz, hogy ezek a szerelési munkálatok ne okozzanak jelentősebb energiakimaradást, célszerű feszültég alatti munkavégzést (továbbiakban: FAM) alkalmazni, amely során nem szükséges a hálózat egyes szakaszait lekapcsolni. Ennek a munkavégzésnek a kivitelezéséhez már számos technológiát kidolgoztak, amelyeknek közös célja mind a gazdasági szempontok előtérbe helyezése, mind pedig a munkát végző szakemberek védelme. Ehhez azonban a legelső feladat a legkisebb védőtávolság értékének a meghatározása. A témában már számos irodalom megjelent és több szabvány is definiálta ennek az értéknek a számítási módszereit. Ezek a numerikus modellek azonban alapjaikban térnek el egymástól, amelynek következtében a meghatározott védőtávolság értéke sem egy egzakt érték egy adott távvezetékre.

Ennek a kutatásnak a középpontjában, két, a témában meghatározó szerepet betöltő, szabvány matematikai modelljeinek elemzése és összehasonlítása állt, annak érdekében, hogy megismerhessük az egyes paraméterek befolyásoló erejét a védőtávolság meghatározásának következtében. Az összehasonlítás során az egyes szabványok szerint meghatározott védőtávolságoknál előfordult baleseti statisztikák is kiemelt szerepet kaptak, a biztonság, mint elsődleges szempont figyelembevételének érdekében. A kutatás célja a FAM során szükséges legkisebb védőtávolság meghatározásának lehetséges módjainak elemzése a gazdasági szempontok előtérbe helyezésével, valamint a szakemberek védelmének biztosításával.

Kulcsszavak: FAM, MAD, védőtávolság, nagyfeszültség

NEVELÉSTUDOMÁNY

PEDAGOGY



Adaptív technológiák a XXI. századi matematikaoktatásban

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Az adaptív tanulás egy újonnan megjelenő technológia az oktatásban, amelyet a tanárok a diákok tanítására és teljesítményük értékelésére használnak (Smith, 2016). Az adaptív technológiában nagy lehetőségek rejlenek, mert lehetőséget ad a tanároknak az egyéni igények alapján történő differenciálásra (Bilous, 2019). Hatékonysága abban rejlik, hogy azonnali visszajelzést ad a tanulóknak, és segíthet a tanulási élmény fokozásában (Matherson & Windle, 2017).

Sok más technológiához hasonlóan ez is folyamatosan fejlődik, ami megnehezíti a tananyag kutatását és frissítését, mivel a programok folyamatosan változnak (Parsons, 2014). A tanároknak is lépést kell tartaniuk ezekkel a változásokkal. Az előadásalapú tanulás helyett a diákoknak nagyobb önállóságot kell adni, a tanároknak pedig arra kell törekedniük, hogy interaktív, magával ragadó és hatékony órákat tartsanak (Matherson & Windle, 2017).

Mivel kevés empirikus kutatás foglalkozott kifejezetten az adaptív technológiával és annak a XXI. századi matematikaoktatásra gyakorolt hatásával, előadásom célja, hogy pillanatfelvételt adjon az adaptív technológiáról, a használatának előnyeiről, valamint a tanárok és a diákok jelenlegi kihívásairól, amelyekkel a technológia használata során szembesülnek.

Az iskolai vezetők hisznek a technológiába való befektetésben; a kutatások azonban azt mutatják, hogy a szoftverekbe és intelligens eszközökbe való egyszerű befektetés nem elegendő (Zhu, Yu, & Riezebos, 2016). A tanároknak is tudniuk kell, hogyan használják hatékonyan az eszközöket. A diákoknak el kell fogadniuk a számítógéppel támogatott tanulás koncepcióját.

Vizsgálatom eredményei azt sugallják, hogy az adaptív technológiák használata a XXI. századi tapasztalati matematikaoktatás sarokköve, amelynek célja a tanulók teljesítményének, motivációjának és a matematikatanulással kapcsolatos pozitív attitűdjének növelése.

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Kulcsszavak: adaptív technológiák, matematikaoktatás, adaptivitás, e-learning, kihívások

„A kognitív térérzékelés felmérésének előnyei a középiskolai földrajzoktatásban. – A hátrányos helyzet mentális térképei magyar középiskolások körében”Székelyné Váncsa Mariann¹¹Földtudományok Doktori Iskola

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Jelen vizsgálat célja annak felmérése, hogy a középiskolai oktatás a 21. században mekkora hangsúlyt fektet a leszakadó térségek gazdasági, társadalmi és területi jellegzetességeinek megismertetésére. A vizsgálat kérdőív segítségével egy megyeszékhely és egy kisváros 160 középiskolásának általános konceptuális és topográfiai ismereteit tárja fel Magyarország hátrányos helyzetű térségeivel kapcsolatban. A vizsgálat célja a földrajztanításban alkalmazható oktatásmódszertani javaslat megfogalmazása a kapcsolódó kerettantervi és érettségi követelményi célok hatékonyabb érvényesülése érdekében. Bebizonyosodott, hogy a tárgyalt témakör oktatása sem az alap-, sem a középfokú képzés során nem kap elég hangsúlyos szerepet. A fogalmi, illetve a topográfiai hiányosságok enyhítésének egyik lehetséges módszere a hátrányos helyzetű térségeknek a földrajzi tananyagban külön fejezetként való kezelése, illetve a követelményrendszerben hangsúlyosabb megjelenítése. A tanítási szünetekben szakmai jellegű kirándulások, terepbejárások, illetve hátrányos helyzetű térségek látogatása révén további lehetőség nyílna arra, hogy a tanulók betekintést nyerjenek a társadalmi-gazdasági egyenlőtlenségek területi jellegzetességeibe.

Kulcsszavak: Hátrányos helyzet, kognitív térképezés, mentális térkép, behaviorizmus, oktatásmódszertan

Cyber threats during distance learning

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Introduction: Distance learning became more popular over the last few years, especially due to Covid-19 pandemic that challenged the education system across the world and forced educators to shift to an online mode of teaching.[1] Moving the teaching-learning process to the cyberspace seemed like an obvious solution as it enabled the schools to continue providing education while kept the teachers and students safe. Undoubtedly it provides a lot of benefits, such as its increased flexibility of teaching and learning, and improved accessibility to education. [2] However, it is important to note that e-learning has disadvantages too, as they are more vulnerable to cyberattacks compared to traditional classes.[3] Little attention has been given to the issue of e-learning security of both in research and education.[4]

Aim: my study aims to discover the latest top cyber threats on education based on global cyber threat reports and examine what could be the potential mitigating actions.

Method: secondary research, processing of relevant industry professional results and literature.

Conclusions: the results show that education is highly exposed to cyber threats nowadays. These threats represent real risks, for example to valuable intellectual properties, student and employee personal information or the reputation of the institution. Institutions should be aware these risks, perform regular cyber security risk assessments and improve the awareness among actors of the teaching-learning process.

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Keywords: cyber security threats, e-learning security, online safety, digital education, security awareness

A gamifikáció és a konstruktivista neveléstudomány lehetséges kapcsolódási pontjai

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A gamifikáció (Fridrich, 2020; Deterding et al., 2011; Kapp, 2017) napjaink egyik feltörekvő tanulásszervezési, értékelési és motivációs rendszere. Egységesen elfogadott definíció, valamint tudományosan feltárt kritériumrendszer hiányában azonban alkalmazására a pedagógiai gyakorlatban sokszor ad hoc módon kerül sor. Ennek kiküszöbölésére kutatásunk szerves részét képezi egy olyan komplex gamifikációs keretrendszer kialakítása, amely világosan lehatárolt kritériumrendszerrel és definícióval segíti a játékosítás hazai és nemzetközi pedagógiai adaptálását és alkalmazását. Jelen előadás a gamifikációs modell megalapozásának részeként a konstruktivizmus (Nahalka, 2002, 2013; von Glasersfeld, 1995), a szociális konstruktivizmus (John-Steiner & Mahn, 1996; Palincsar, 1998; Vygotsky, 1978), valamint a rájuk épülő konstruktivista neveléstudomány és a gamifikáció lehetséges kapcsolódási pontjainak feltárására tesz kísérletet. Elméleti vizsgálatunkban áttekintjük a konstruktivizmus különböző megközelítéseit, majd a gamifikáció értelmezési keretei mentén feltárjuk azon didaktikai és koncepcionális jellemzőket, amelyek integrálása megfontolandó a gamifikációs keretrendszer későbbi kialakítása során.

Irodalomjegyzék:

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From Game Design Elements to Gamefulness: Defining “Gamification.” Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments, 9–15. [https://doi.org/10.1016/s0022-5347\(11\)60242-5](https://doi.org/10.1016/s0022-5347(11)60242-5)

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Kulcsszavak: gamification, konstruktivizmus, konstrukcionizmus, neveléstudomány, keretrendszer

Megvalósul-e az értékteremtő nevelés a családban?**Major Enikő¹, Hegedűs Gabriella¹**¹Debreceni Egyetem Bölcsészettudományi Kar Humán Tudományok Doktori Iskola
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A nevelési értékekre fókuszáló kutatások (Szabados, 1996; Pusztai, 2011; Verdes, 2017; Dusa, 2020) lehetőséget biztosítanak az értékteremtő nevelésben megvalósuló szülői és pedagógusi preferenciák vizsgálatára. A felekezeti és állami általános iskolába járó alsós diákok szüleinek vizsgálatára még kevés kutatás vállalkozott, hiszen ezek leginkább a középfokú oktatás aktoraira irányultak ezidáig. Éppen ezért tanulmányunkban arra keressük a választ, van-e szerepe a közoktatás éveiben a család által birtokolt kulturális- és vallási tőkefajtáknak (Pusztai, 2020; Engler és mtsai, 2021), a szülők vallásos önbesorolásának, illetve annak, hogy milyen fenntartóhoz tartozó általános iskolát választanak gyermekeiknek abban, hogy milyen értékek preferálása dominál nevelési elveikben. A KINCS Értékteremtő gyermeknevelés (2020) és az Értékteremtő gyermeknevelés a felekezeti iskolákban (2020) című, Tiszántúlon felvett kérdőíves kutatások szülői nevelési értékekre vonatkozó kérdéseire adott válaszokat SPSS program segítségével elemeztük, leíró statisztikát és ANOVA-tesztet alkalmazva. Vizsgálatunk eredményeként megállapítottuk, hogy a szülők iskolai végzettségétől nem függ nagymértékben az értékpreferenciájuk, de ez, illetve a vallásos önbesorolásuk hatással van arra, milyen fenntartású iskolába íratják be gyermekeiket, ezáltal mennyire van szignifikáns összefüggés az értéksorrendjük és a különböző vizsgált változók összehasonlításában. A tanulmány eredményében a felelősségérzet, mint érték kialakítása dominál, mely további összehasonlításra ad lehetőséget a szülők és pedagógusok értékpreferenciájának vizsgálatában.

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Characteristics of tablet use in the classroom with disadvantaged students

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The use and role of infocommunication technologies (ICT) in classroom work is a hot-button topic today, affecting many scientific and pedagogical communities. Linked to this discourse, the lecture places the characteristics of the use of ICT tools in the conceptual framework of disadvantage compensation and addresses the question of how the use of tablets in classrooms can help the development of key competencies and abilities. In addition to the methodological features, the intermediate results of a longitudinal study are also presented.

Disadvantaged students are involved in large numbers in the school drop-out process, especially in secondary education, therefore it is worth examining the possible means of school interventions that could reduce the negative effects of the drop-out phenomenon and compensate for the disadvantages suffered by students. The lecture introduces student tablet use as an effective tool for disadvantage compensation in the classroom learning process and reviews the subject pedagogical characteristics and student attitudes associated with its use.

During the analytical presentation of student tool use, which is the focus of the study, a distinction can be made between application-based and creative activity-based use as to the type and nature of the applications used.

Related to creative activity-based use, the results of a questionnaire survey are presented, which assessed the evaluative attitudes of surveyed students in relation to classroom tablet use. Disadvantaged and cumulatively disadvantaged students were included in the study through the convenience sampling procedure. Students completed the Likert Scale Questionnaire on a voluntary basis in January 2021.

A feature of the student sample involved, in addition to the socioeconomic status already mentioned, is that the participants are young people between the ages of 15 and 20, studying at Tan Kapuja Buddhist High School in grade 9-12. The number of students completing the questionnaire is 53.

The intermediate results of the study presented in the presentation, in relation to the cognitive and affective dimensions of tablet-supported lessons, draw attention to positive student attitudes related to learning activities, the development and reinforcement of which can contribute to reducing the number of disadvantaged students at risk of dropping out.

Keywords: ICT use, school disadvantage compensation, disadvantaged students, tablet-supported education

Musical Instruments' African-Based Studies: The application of the Afro-Brazilian knowledge to study non-African-based musical instruments

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In the last two decades, the Brazilian music scenario has been marked by a myriad of changes due to the expansion of African-based music education. An increasingly academic-oriented interest in studying and applying musical knowledge stemming from African-heritage sources can be noticed in Brazilian universities, congresses, conventions, journals and other formal structures. Beyond historical and ethnographic investigations linked to African-matrix music and its ascendants from ethnomusicological, philosophical and social viewpoints, it can be observed a growing interest in scrutinizing African-based music and applying the developed knowledge in the study of “non-African-based” musical instruments like piano, acoustic guitar, electric guitar, electric bass and drums. Institutions and researchers from Salvador city, as the world’s biggest Afro-descendent city outside the African continent, hold an important role in the development and dissemination of this type of knowledge. Accordingly, the present article has as its general aim to discuss possible intentions and implications of the examination of African-based music traditions for their application in the study of non-traditional African instruments. It employs critical, sociological and ethnomusicological perspectives to reflect on the possible impacts of this phenomenon in the music education scenario, focusing on the content that was developed in Salvador city or based on the Salvadoran context. Thereby, this paper has four specific aims to support the general purpose: 1) To present the Salvador city and the main historical and social elements that can affect musical contexts; 2) To present some recent publications with a focus on the application of musical knowledge inherited from African-Brazilian traditions in instruments other than the originally used in the traditional contexts; and 3) To analyze these materials from a music education perspective. Pursuing these aims, the current study applies a qualitative documental analysis as its methodological approach to acquire the data, examine the materials and develop the knowledge supported by diverse written, audio and audiovisual sources. In spite of this investigation being focused in a municipal context, it is expected that a better understanding of a regional phenomenon can create effects that reverberate not only in a local music context but also in broader levels and sectors of music education in globalized societies.

Keywords: Critical Theories; Afro-Brazilian Music; Music Education; Music Instrument

Egy hibrid érzékenyítő foglalkozáson való részvétel hatásvizsgálata - fogyatékosággal élőkkel kapcsolatos attitűd elemzése

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Bevezetés: A többségi társadalom fogyatékosággal élőkkel szembeni attitűdjének vizsgálata alulkutatott terület [1] és a hallgatók attitűdje az egyik legnegatívabb [2]. Az attitűdöt befolyásolja a nem, az életkor, korábbi kapcsolat egy fogyatékosággal élő társsal, az előzetes tudás, az önértékelés, az életminőség és a kulturális faktorok is [2]. 2020-as felmérés alapján a válaszadók 45%-ának van fogyatékosággal élő ismerőse [3,4].

Célkitűzés: Célunk a fogyatékosággal élőkkel kapcsolatos attitűd és az érzékenyítő foglalkozáson való részvétel vizsgálata.

Módszer: Az adatgyűjtési módszerünk a foglalkozás-sorozat kezdetén és végén a kikérdezés volt, a foglalkozások személyesen Pécsen zajlottak 2022 tavaszán. A kérdőívünk közel 50 kérdést tartalmazott, beemelve validált mérőeszközöket (MAS, ATDP-O kérdőív, eszköz- és célértéket mérő értékskála). Összesen 8 fő vett részt és az adatok feldolgozása SPSS 24.0 statisztikai programmal készült.

Eredmények: A válaszadók attitűdjéről a MAS kérdőív eredményei alapján mind a három dimenzióban (érzelmi, viselkedési, megismerési) igen negatív képet rajzolódik ki. Pearson korrelációt használva a MAS- kognitív komponens értékei között szignifikáns, pozitív, magas erősségű összefüggést találtunk, $r = .924^{**}$ $p = .001$ (1-tailed). Általában elmondható, hogy minél több érzékenyítő foglalkozáson vett részt, annál magasabb a megismerési attitűd a fogyatékosággal élőkkel szemben.

Következtetés: Az érzékenyítő foglalkozások, az attitűdformálás létkérdés, hiszen a többségi társadalom fogyatékos személyekkel szembeni attitűdje negatív.

Támogatás: Az Innovációs és Technológiai Minisztérium ÚNKP-22-3 kódszámú Új Nemzeti Kiválóság Programjának a Nemzeti Kutatási, Fejlesztési és Innovációs alaphól finanszírozott szakmai támogatásával készült.

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Kulcsszavak: életminőség, egészség-érték, fogyatékoság, attitűd, érzékenyítés

A felsőoktatás munkaerőpiacra való felkészítő szerepének és a hallgatók kompetenciáinak vizsgálata

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A 21. században előtérbe került a kompetenciák fejlesztésének igénye. Az oktatási rendszerek többsége a végzeteket olyan kognitív képességekkel látja el, amelyek a munka világába való belépéshez szükségesek. Azonban a puha készségek teszik lehetővé, hogy a végzetek potenciális munkaerővé váljanak. A hazai felsőoktatásban erősen jelen van a tanárközpontú oktatás, azonban ezek a módszerek nem támogatják a puha készségek fejlődését. Kutatásunkban vizsgáljuk, hogy a hallgatók milyen kompetenciákkal rendelkeznek, s ezek milyen mértékben illeszkednek a munkahely által elvárt követelményekhez. Továbbá elemezzük, hogy a felsőoktatási intézmények hogyan támogatják a hallgatók munkaerőpiacra való kilépését. Az alábbi kérdésekre a Frissdiplomás kutatás 2020 adatbázisát felhasználva keressük a választ, míg interjúk kutatásunkkal szeretnénk árnyalni a másodelemzés eredményeit. Az adatbázisban szereplő hallgatók legalább harmada rendelkezett olyan kompetenciákkal, mint elméleti szaktudás, digitális kompetencia vagy konfliktuskezelés. Azonban a tanulmányaik mellett dolgozó hallgatók körében szignifikánsan magasabb arányban voltak azok a hallgatók, akik a felsorolt képességgel teljes mértékben rendelkeztek. Hasonló eredmények születtek az interjúk kutatásban is. A kvalitatív kutatási szakaszban a diploma megszerzése előtt álló felsőoktatási hallgatókkal készítettünk félig strukturált interjúkat (n=9), a végzett hallgatók (n=9) esetében a mintát annak megfelelően alakítottuk ki, ahogyan a képzésben lévő interjúalanyok összetétele alakult. Összességében azt láthatjuk, hogy a hallgatók által megnevezett fejlődési pontok, kompetenciák nem igazán esnek egybe a munkaerőpiaci elvárásokkal. Az említett területek (kitartás, szorgalom, memória) valóban fontosak lehetnek a későbbi munkavállalás során is, viszont olyan kompetenciák nem kerültek említésre, amelyek napjainkban is felértékelődtek a munkaerőpiacon. Az interjúalanyok egy része a hallgatói munkavállalás alatt szerezte meg a legfontosabb kompetenciákat és nem az egyetemi képzés során. A kutatás eredményei számos olyan kulcsfontosságú területre és azok hiányosságára világíthatnak rá, amelyek fejlesztése nemcsak az egyén szintjén fontosak, hanem hosszabb távon az egyetemi képzések megítélése szempontjából.

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Kulcsszavak: felsőoktatás, munkaerőpiac, kompetenciafejlődés, hallgatói munkavállalás

Kreatív zenei készségek tanítása (Különböző fejlesztési módok a hangszeres zeneoktatásban)

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A hangszeres oktatásban nagy szükség van a kreatív készségek fejlesztésére. A zenei kreativitás kreatív tanári személyiséget és kreatív módszertani tudást igényel. A kreatív zenetanulás javíthatja a tanulók kreatív készségeit. Az improvizáció, a zenei nevelés kreatív formája, a kreatív gondolkodáson és a találékonyságon alapul. Az improvizatív megközelítés kifejezetten segíti a klasszikus zene tanítását, valamint a zenei nyelvhasználat fejlődését. Az improvizációs gyakorlatok a tanár hozzáértő irányításával az iskolai zeneoktatás részét képezhetik. Ebben az empirikus kutatásban kérdőíves felmérés segítségével vizsgáljuk a fuvolatanárok módszereit a zeneórákon. A kutatási kérdések a következők: mennyire elterjedt a zenei alkotó gyakorlatok és játékok használata, és mennyire használják ezeket a gyakorlatokat a tanítás során. Kijelentésekből és módszertani eljárásokról szól a kérdőív, amiről a fuvolatanárok véleményt mondanak. Mennyire használják a tanításuk során az adott feladatokat. A véleményeket összegezve információkat kapunk arra vonatkozólag, hogy a napi munkájukba mit gondolnak beépíthetőnek, és a módszerek a gyakorlatban hogyan valósíthatóak meg. A kutatást a Survio online kérdőívkészítő programmal végeztük, az eredmények kiértékeléséhez pedig SPSS program többváltozós skálázási módszerét alkalmaztunk. Hipotézisek:

Kiemelt képességfejlesztő szempontunk, a zenealkotással kapcsolatban fogalmazzunk meg előzetes feltevést, hogy a tanár alkalmaz-e a zeneórán zenealkotó feladatokat?

A kreatív zenélés esetében az időhiány és a módszertani ismeretek hiánya miatt alacsony pontszámra számítottunk. Az eredmények alapján elmondható, hogy a kreatív, improvizatív módszereken alapuló zeneoktatásban más megközelítésre van szükség. Végezetül néhány fontos javaslat kerül megvitatásra, amelyek beépíthetők a zenetanárok mindennapi pedagógiai munkájába.

Kulcsszavak: kreativitás, improvizáció, zenealkotás

Relationships between school performance variables of students at risk of early school leaving

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Early School Leaving (ESL) emerged as an important societal issue in most EU countries in the 1980s and 1990s (Schmitsek, 2022) According to OECD (2012) in the last thirty years the early school leaving one of the major problems of education system. The aim of the research was the explore the parental assistance, the relationship with teachers, the class community, and the relationships between variables in school performance among students who are at risk of leaving school early. Sokunrith et al (2022) think socioeconomic status and parent education as a strong predictor for school dropout. Parent's education level determines their attitudes and behavior toward education and their involvement in their children' learning. The instrument was filled it out N=741 participants, primary school students. The participation was voluntary and anonymous. The questionnaire included 39 items and background questions (gender, age, class, etc.). The reliability of the instrument is good (Cronbach-alfa= 0,612). Based on our results, boys accounted for the majority of the sample (N=411). Most of participants were in 5th grade (N=246). There was an equal distribution between the 6th, 7th and 8th graders (N6th graders= 166; N7th graders=165; N8th graders=164). Our results also revealed that there is a strong significant correlation ($r=0,657^{**}$) we found a positive association between the relationship with teachers and school performance. We find moderately strong correlation ($r=0,495^{**}$) between the relationship of trust with parents and school performance. We found a very weak correlation ($r=0,254^{**}$) between parents' attitude towards school and parental control. Finally, we found a strong correlation ($r=0,958^{**}$) between parental praise and the relationship with teachers. From the data of the questionnaire, we came to the conclusion that the relationships of students at risk of dropping out contribute greatly to their success at school and leaving school early.

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Keywords: early school leaving, school performance, family, school, relationship

Kreatív szövegalkotást fejlesztő program megvalósítása a Kreatív Pedagógia Kutatóműhely keretében

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Az intézményünkben létrehozott Kreatív Pedagógia Kutatóműhely keretében több olyan kezdeményezés is elindult, amelynek célja a kreatív tanítási-tanulási szemlélet kialakítása, támogatása, elsősorban a gyakorló pedagógusok körében. Ez napjainkban különösen indokolt, hiszen Bereczki és Kárpáti (2018) kutatásából kiderül, hogy noha a fogalom megítélése alapvetően pozitívnak mondható, a tanári vélekedések mégis sokszor olyan naiv és téves elképzelésen alapszanak, minthogy a kreativitás egyenlő a tehetséggel vagy az intelligenciával. Ezért az elmúlt két évben intézményünkben Kreatív pedagógia kutatási szemináriumot indítottunk, valamint akkreditálásra került A kreativitás fejlesztése iskolai környezetben című pedagógus továbbképzésünk. Ezen kívül az elmúlt tanévben egy pedagógiai kísérletet is megvalósítottunk, amely az idegen nyelvi kreatív szövegalkotás fejlesztésére irányult az általános iskola 6. osztályában. Ehhez mérőeszközként saját fejlesztésű kreatív írás feladatsort, valamint a divergens gondolkodás vizsgálatára az Urban és Jellen által kidolgozott figurális kreativitástesztet (TCT-DP) alkalmaztunk. Jelen munka ezt a hat hetes pedagógiai kísérletet hivatott bemutatni, amelynek lényegi része a heti egy alkalommal tartott fejlesztő foglalkozás. Ehhez kapcsolódóan két szempontra fókuszálunk: az egyik a fejlesztés során alkalmazott gyakorlatok, a másik a kreatív szövegalkotás értékelése, amelyhez az ötletgazdagság (fluencia), az eltérő új elemek száma (fluencia), valamint az eredetiség (originalitás) kreativitás-mutatókat rendeltük hozzá, illetve adaptáltuk a kreatív írás sajátosságait figyelembe véve. Előzetesen elmondható, hogy a megelőző pilot programhoz képest hatékonyabban tudunk dolgozni, amit reményeink szerint statisztikai elemzéssel is alá tudunk támasztani. Az eredmények kiértékelése folyamatban van. Célunk továbbá a kreatív írás módszerének népszerűsítése és jó gyakorlatként való megosztása további fórumokon.

Kulcsszavak: kreativitás, divergens gondolkodás, fejlesztés, szövegalkotás

NYELVOKTATÁS

LANGUAGE LEARNING



Cultural capital and educational achievement in shadow education: results of a quantitative study on private language tutoring

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Introduction: During the globalization of the 21st century, the significance of language knowledge has become more essential than ever. In order to enhance their children's learning opportunities, more and more families take advantage of the different forms of private language lessons. Private tuition offers students with a higher socio-economic status the opportunity to expand their knowledge, while at the same time, students with a lower status participate in other non-formal courses for remedial purposes (Imre 2020).

Aim: The aim of our pilot study is to reveal what value students attributed to language knowledge, as well as to explore correlations between students' socio-economic status (SES), school performance and motivation to participate in private tuition (Hegedűs 2020).

Methods: In the present quantitative study (N=70) research questions are analyzed regarding the nature of private tuition students took part in and correlations between SES and language learning goals in private language tuition are examined.

Results: Our results show that there is an interrelationship between the rate of attendance in private language tutoring and cultural capital as the mother's academic qualification determined the values families attributed to language learning. In addition, students participating in private tuition intended to enhance their career aspirations in a larger proportion than students who did not attend private tuition.

Conclusions: Our results emphasize the role of cultural capital in language learning as a value and confirm the literary findings (Diaz 2019). Albeit the limitations of the present study, our research can form the basis for further research in exploring the characteristics of private language tuition.

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Keywords: cultural capital, educational values, private language tuition, shadow education, socio-economic status

Konverbek a modern szláv nyelvekben

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Előadásom témája a konverbek összehasonlító vizsgálata a modern szláv nyelvekben. A konverb, mint nyelvtani kategória, a szláv nyelvekben az egyik legkésőbb kialakult, a XIV. századtól kezdett megjelenni. A határozói igenevek egykor még ragozható, melléknévi igenevek voltak, azonban az egyes szláv nyelvek fejlődése során határozószókká váltak. Ugyanakkor ezen nyelvtani kategória az egyes szláv nyelvek fejlődése során változott morfológiailag, szemantikailag és szintaktikailag is, valamint vannak olyan szláv nyelvek, amelyekben a valamikori két konverb helyén ma csak egyet találunk, sőt egyes nyelvekben kiveszőben van e kategória. Minden szláv nyelvben két határozói igenév volt, a múlt idejű és a jelen idejű, azonban ma nem találjuk meg mindkét konverbet mindenhol. A vizsgálat első részében összehasonlítom a modern szláv nyelvekben meglévő konverbek morfológiáját, azaz, hogy az egyes konverbeket mely képzőkkel képzik és milyen szemléletű igékből képezhetők. A morfológiai vizsgálatot a szintaktikai követi. Ebből a kutatásból az derül ki, hogy egy adott szláv nyelvben megvan-e mindkét konverb, valamint, hogy a konverb és az állítmány alanya között van-e koreferencia és, hogy az alany expliciten vagy impliciten van-e kifejezve. A kutatás utolsó része a szemantikai vizsgálat. A konverbek elsődlegesen temporális jelentéssel bírnak, a múlt idejű konverb legtöbbször az állítmányhoz képest múlt idejű cselekményt fejez ki, a jelen idejű pedig egyidejű cselekményt, viszont erre vannak kivételek. Azonban a temporális szemantika mellett kontextustól függően a konverbek kaphatnak másodlagos jelentéseket is. A mai szláv nyelvekben nem mindenhol találjuk meg a másodlagos szemantikát, megállapítható, hogy abban a nyelvben, amelyben a konverbek használata gyakoribb, ott többféle jelentés jelenik meg.

A vizsgálat célja, hogy megállapítsuk a kapcsolatot a konverbek jelen állapota és a szláv nyelvek tipológiai tulajdonsága között.

Mivel a szláv nyelveket illetően tudomásom szerint sem történeti sem pedig leíró szempontból nem készült még ilyen összehasonlító vizsgálat az igeneveket tekintve, ezért a vizsgálat előrelépést jelent az összehasonlító nyelvtudományban.

Kulcsszavak: konverbek, szlavisztika, összehasonlító nyelvészet

L3 French teachers' perceptions of the role of L2 English in their teaching practices

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Introduction

In the Hungarian educational system, multilingualism is present as a goal, therefore, most students arrive in L3 classrooms with a prior L2 knowledge. One common language pairing is English-French, where prior knowledge might be exploited to enhance the learning process. However, teaching practices vary vastly among L3 teachers based on their teaching methods and their views of multilingual teaching.

Objective

My research focuses on how L3 French teachers perceive the role of English in their own work and how they use students' prior L2 knowledge. The research questions were the following:

1. How do teachers use students' prior knowledge of L2 English grammar to teach L3 French grammar?
2. How can teachers use students' English vocabulary knowledge to teach French vocabulary?
3. How can teachers use L2 learning experience in order to motivate students in their L3 learning process?

Method

In summer 2022, I conducted semi-structured interviews with 10 Hungarian high school teachers currently teaching French in grades 9-12 in grammar schools all over the country.

All teachers in the study were English-French bilinguals, 5 teachers being at B2 level, 2 of them at B1 level, and 3 teachers having an advanced level of proficiency. The participants' teaching experience ranged from 5 to 38 years. The aim of the interview was to gain an insight into what bilingual teaching methods they use in grammar and vocabulary teaching, and how they view the motivation of bilingual students.

Results

L3 teachers argued for the importance of exploiting prior knowledge, highlighting the efficiency of teaching, the speed of the learning process and student autonomy. Both L2 grammar and L2 vocabulary knowledge were said to be an important basis for further L3 learning, and prior learning experiences were also said to be important factors that shape L3 learning attitude.

Conclusion

Based on the results obtained from the participating teachers, multilingual teaching practices are present in Hungarian schools, although the lack of such teaching materials were also brought forward as a problem. In order to help teachers construct a multilingual classroom, plurilingual teaching materials would be beneficial in order to exploit the prior knowledge of students in the L3 learning process.

Keywords: multilingual teaching, crosslinguistic influence, third language acquisition, prior knowledge

A study on Hungarian Chinese learners' pronunciation for Chinese nasal finals

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This paper mainly focuses on Hungarian Chinese learners' perception of their learning of Chinese pronunciation. Although there are few studies on the comparative linguistic analysis between Hungarian and Chinese, there is very little literature on Hungarian Chinese learners' experience with Chinese pronunciation. In the study, Hungarian Chinese learners' perception of their ability to pronounce Chinese nasal finals, and their Chinese teachers' perception of their actual pronunciation of Chinese nasal finals were investigated to compare them. In addition, the Chinese nasal finals that Hungarian Chinese learners usually mispronounce were also examined. In doing so, a questionnaire for Hungarian Chinese learners, interviews with Chinese teachers, and test results of Chinese nasal finals pronounced by Hungarian Chinese learners were employed as instruments. 51 Hungarian Chinese learners from six universities in Hungary that have Chinese courses, and 8 of their Chinese teachers (4 native Chinese teachers and 4 Hungarian Chinese teachers) participated in the research. The data includes the responses from the questionnaire for Hungarian Chinese learners, semi-structured interviews with their teachers, and the results from the reading aloud test. Mean score was employed for the data from the questionnaire and in-depth analysis was carried out for the interview data and the test results.

Results: It was found that although Hungarian Chinese learners thought that they did not have any difficulty pronouncing Chinese nasal finals, their teachers thought that there were some Chinese nasal finals which Hungarian Chinese learners could not pronounce such as [iŋ], [wəŋ] and [oŋ]. The data in the reading aloud test also showed that the velar nasal [ŋ], the alveolar nasals [wəŋ] and [ʧəŋ] were the nasal finals which were the most difficult for Hungarian Chinese learners to pronounce correctly.

Conclusions: The study shows that the perceptions of the Hungarian Chinese learners in the study and those of their teachers on their ability to pronounce Chinese nasal finals were different to some extent.

Acknowledgment: Our sincere thanks are to all the participants in this study for generously spending their time with us and sharing their experience of learning/teaching Chinese.

Keywords: Hungarian Chinese learners, Chinese nasal finals, Pronunciation

A corpus-driven pilot study of learner Englishes from Greater China

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Introduction: English has penetrated deeply into Chinese societies in the last few decades and corresponding linguistic research has been fruitful. However, scrutiny of related literature shows that learner language research of the three major regions of Greater China, viz, mainland China, Hong Kong, and Taiwan, remains to be isolated, possibly due to political barriers. A primary problem that arises from such a situation is that little is known about how learner Englishes from Greater China are related to each other.

Aim: The present study intends to fill this gap by identifying the similarities and differences between the three learner Englishes from Greater China.

Method: Considering that corpus research has formed the backbone of learner language research, the corpus-driven approach is adopted to analyze the three Chinese learner data sets from the International Corpus Network of Asian Learners of English (ICNALE).

Results: Comparisons between native and non-native (both spoken and written) corpora demonstrate a number of distinctive characteristics shared by the Chinese learners of English from Greater China. Surprisingly, marked differences can also be observed between the three learner corpora, for example, learner data from mainland China generally reveal a highly self-involved collectivistic stance, while the two learner data sets from Hong Kong and Taiwan stand out with an impersonal style and a self-involved individualistic style respectively.

Conclusion: The results of the research prove that the three learner Englishes from Greater China share certain similarities and at the same time, they are somewhat different. One major implication of the research is that influence of L2 learners' social background cannot be ignored in learner language research. Additionally, results regarding under- and overuse that are identified in the English data produced by Chinese learners may also carry important pedagogical implications.

Keywords: learner English, learner language research, Chinese learner of English, Greater China, corpus research

The Hungarian expression *akárcsak* as a complementizer

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The talk discusses the Hungarian expression *akárcsak*, which is a complementizer, because it cannot appear as an independent sentence (1a), and it is able to conjoin two clauses with different subjects and different conjugations (1b).

(1) a. *Akárcsak. / És. / Mert. / Hogy.
 as and because that

b. Péter felkérte táncolni Marit, akárcsak én Julit.
 Peter asked.3sg to dance Mary.Acc as I July.Acc

b'. Péter felkérte táncolni Marit, én meg Julit.
 Peter asked.3sg to dance Mary.Acc I and July.Acc

b''. Akárcsak én Julit, Péter is felkérte táncolni Marit.
 As I July.Acc Peter also asked.3sg to dance Mary.Acc

Intended meaning (1b-b''): 'Peter asked Mary to dance, and so did I with July.'

In that case, when two clauses show semantic parallelism like (1b-b'), conjunction is usually used in Hungarian. However, *akárcsak* has subordinate attributes since the complementizer is part of the subclause and it can be moved with it (1b''). If *akárcsak* appears at the beginning of the sentence, a distributive element (*is* 'also') has to be in the matrix clause for semantic parallelism (1b''). Comparison is considered a subgroup of semantic parallelism, a meaning accessible with the expression *mint* 'as, than', which shows similar attributes to *akárcsak*, therefore their comparison is beneficial.

(2) a. Péter magas, akárcsak/mint én. /*akárcsak /mint én vagyok.
 Peter tall as/than I. /as /than I am
 'Peter is as tall as I am.'

b. Péter magasabb, *akárcsak/mint én.
 Peter taller as/than I.
 'Peter is taller than me.'

c. Péter felkérte táncolni Marit, akárcsak/mint ('ahogyan) Zoli Julit.
 Peter asked.3sg to dance Mary.Acc as/than as Zoli July.Acc
 'Peter asked Mary to dance, as Zoli did with July.'

Akárcsak and *mint* are interchangeable when the subclause refers to equality (2a), but in unequal meaning only *mint* can be used (2b). Therefore, *akárcsak* is an equative comparative expression. As (2a) illustrates, the structure of an *akárcsak*-subclause is always ellipted, i.e. the lack of verb is obligatory, contrary to a *mint*-clause. In the case of equal comparison, both expressions are useable on their own, as long as the comparison is based on an attribute and not a situation. The *mint*-clause has to contain a relative pronoun in this case (*ahogyan* 'as').

The results of the research were obtained as a combination of several methods: introspection, intersubjective experiment and testing evaluations of native speakers.

Keywords: complementizer, conjunction, subclause, equality, distributive

POLITIKATUDOMÁNY

POLITICAL SCIENCE



The rehabilitation of the Budapest School at the Hungarian Academy of Sciences (1988-1990)

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The General Assembly of the Hungarian Academy of Sciences (in the following: HAS) rehabilitated the members of the Budapest School in May of 1989 before the regime change in 1989/1990. In my presentation, I will examine why and how the Academy was able to rehabilitate Ágnes Heller and her colleagues before the political regime change. I will provide an overview of the process through the following questions: What role did Ivan, Berend T. (the President of the HAS) and István Láng (Secretary-General of the HAS) play in the proceedings? How were the events catalysed by the new, independent trade union, the Democratic Trade Union of Scientific Workers (TDDSz)? How did the HAS try to re-integrate the Budapest School after the Great Assembly? How can we evaluate these rehabilitations in the context of the regime change?

Keywords: Hungarian Academy of Sciences, Regime Change, Budapest School, Rehabilitation, TDDSz

The German Intervention in the Baltics 1919

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In the recent 10-15 years researchers focused on and published papers in great numbers about the Great War and its effects in Eastern Europe which formerly was a neglected topic. The german campaign in the Baltics is still neglected even despite the fact that it strongly connects to the paramilitary violence in Central and Eastern Europe which became historians' main focus in the last 10 years. The fact that during the spring and summer of 1919, even after the signing of the Treaty of Versailles german troops in the Latvia fight an expansionist war is already interesting on its own. Initially the german campaign's main goal was the easing of the peace conditions via joining the anti-bolshevik struggle in the Baltics. After the April Coup of 1919 a new latvian government was established, mostly by baltic germans and the anti-bolshevik war became a german expansion. The stance or the involvment of the german government is still not clarified. When Germany started to use White Russian formations in the Baltics the intervention became part of the Russian Civil War too but the question of german authority over the russian or even the german troops is still need further research. Although the german troops in the Baltics ultimately failed to secure german domination, they played a decisive role in stopping the soviet Red Army in a crucial time in one of the geopolitically most important region of Europe and establishing the postwar order of the Interwar Years.³

Keywords: Germany, Baltics, Freikorps, Russia, Latvia

Az első világháborút népszerűsítő reklámok – Variációk és változatok a korabeli sajtóban

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Az első világháborús propaganda nem előzmények nélküli, hiszen a 19. század végén megváltozott a propaganda és ez a változás előrevetítette, hogy ezekben az időkben minden addiginál fontosabb lesz a manipuláció és a meggyőzés. Ennek megfelelően a propaganda kontextusába kívánom helyezni az első világháború alatt megjelent hirdetéseket és reklámokat. A háborús lelkesedés terjedését sokan a sajtó szerepének, mozgósító hatásának tulajdonították. Katonailag és pszichológiailag egyaránt szükségessé vált minden hadviselő ország számára a teljes népesség együttműködése – ez volt az első világháború egyik fontos hozománya, a fegyverek nélküli hadviselés az otthoni vagy hátsó fronton is.

Előadásom az otthoni front propagandájával ezen belül a korabeli sajtóban megjelenő propagandisztikus reklámokkal és azok változásaival, alakulásaival kíván foglalkozni az első világháború négy éve alatt. A vizsgálat adalék lehet a sajtótörténeti kutatásokhoz, illetve a világháború propagandatevékenységének megrajzolásához.

Kulcsszavak: első világháború, propaganda, reklám, sajtótörténet

The role of women and their use in propaganda for the space race in the 1960s

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In my presentation, I would like to show the role of women in the space race in the 1960s and how this was used by the parties involved to convey their messages and ideology to the public, generating a kind of female role models alongside the male astronauts. The focus will be primarily on the wives of the first US astronaut group (Mercury Seven) and the first female cosmonaut, Valentina Tereshkova.

The space race (1957-1975) opened a new area in the rivalry between the United States and the Soviet Union. Astronauts became the new heroes of the age, bringing victory to socialism or restoring America's prestige. But the masculine world of astronauts was not missing in female characters.

In 1959, LIFE magazine signed a contract with the first astronaut team and their wives, which allowed them to report on the astronauts' training and later on their space flights. They were the ones who provided a supportive family environment, and this motif regularly appeared in the articles they wrote. Wives fitted perfectly into the role that was typical of the society of the time. It is an ideal family picture, which is well reflected in the pages of newspapers and on the front pages. Astronaut wives were a model for women. They contributed as mothers, as wives, supporting the chosen ones in all their efforts to win the space race. Like astronauts, who embodied masculine ideals, the perfect American, the patriot, or, on the other side, the new Soviet man.

Propaganda has always been a key factor in the Soviet space program, and Tereshkova's selection was also based on her ability to be used in propaganda and to present the values and messages that the Soviets wanted to represent. She could serve as a role model for young girls and women, while also seemingly representing the realization of gender equality. Her role, however, gradually changed and she became a wife and mother, supporting various women's cases through her work.

The novelty of the space age offered a great opportunity for new characters and role models to appear in the press. Who have presented an ideal picture of what a caring wife, a mother, a woman whose husband does dangerous work for the glory of her country. Or it shows that with learning and perseverance, even outer space is not out of reach for girls. Even if the next female astronauts had to wait until the 1980s.

Keywords: Space race, space age, women and space, propaganda

Az újjáépítés női harcosai: A Magyar Nők Demokratikus Szövetségének tevékenysége 1944–1948 között

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1944. november 5-én Szegeden megalakult az Antifasiszta Dolgozó Nők Szövetsége, majd új nevet választva még ebben a hónapban, mint Magyar Nők Demokratikus Szövetsége jelentek meg. Fennállásának első éveiben a nőszervezet sokszínű munkát végzett, melynek fontos részét képezte a II. világháború utáni újjáépítésben való szerepvállalás. Előadásomban ennek részletes elemzésére és ismertetésére teszek kísérletet.

Célom megvizsgálni, hogy a nőszövetség milyen módon és módszerrel járult hozzá az ország feltámasztásához, aminek keretén belül bemutatom a legkülönfélébb munkaköreiket. Továbbá szeretném feltárni a nőegyesület és a Magyar Kommunista Párt közötti kapcsolatot, ugyanis hiába hirdette az MNDSZ a két intézmény különállását és pártoktól való függetlenségét, mégis volt köztük egy aránylag szoros viszony. A felvetett kérdések megválaszolása érdekében – a vonatkozó szakirodalom feldolgozása mellett – elsősorban a levéltári iratok kerülnek feldolgozásra.

Megállapítható, hogy a nőszervezet sokrétű munkát végzett az ország felélesztésében. Alapvetően azok a tevékenységek, melyeket a nők az újjáépítés során végeztek, a jótékonyosság pillérjein nyugodtak. Elsősorban a betegek, a gyermekek, az édesanyák és a rászorulóknak megsegítésére koncentráltak. Az előbbi egy kis szeletét képezte például a kórházak, az iskolák és a szülőotthonok alapítása vagy helyreállítása. Ahhoz, hogy tevékenységüket fedezni tudják többféle akciót – leghíresebbek a karácsonyi- és hadifogoly- akciók voltak – és számos gyűjtést – például a sokgyermekes anyáknak – szerveztek. Elvitathatatlan tény, hogy a szövetségnek kimagasló szerepe volt a háború utáni újjáépítésben, viszont ennek háttérében a kommunista párt támogatottsága is állt, amelyet jól mutatnak már a korai években előirányzott útmutatások és tanácsadások, valamint a nőegyesület anyagi támogatása a párt részéről. Végül 1948. áprilisában az MNDSZ II. kongresszusán kihirdetésre került a „női egység” megszületése, amikor minden más nőszervezet vagy beolvadt az egyesületbe, vagy feloszlott. Ezt a folyamatot tovább erősítette a júniusban létrejött Magyar Dolgozók Pártja, ettől a pillanattól kezdve nem kellett titkolni a két intézmény összefonódását. Már ekkor érezhetővé vált az új irányvonal, amely előrevetítette az MNDSZ munkásságának elszíntelenedését és egyben új feladatkörét a párt szolgálatát.

Kulcsszavak: jótékonyosság, MKP, MNDSZ, sokszínűség, újjáépítés

Representation trends of historical events in media memory

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The Web is the most complex collection of material documenting contemporary social, cultural and political life, making it a valuable resource for scholars of multiple disciplines. The material born on the web and archived (as Digital Cultural Heritage) is not only useful for web historians who want to examine the development of the web, but also for future historians. In the present research, I introduce an additional field of use of these resources. Phenomena and trends in media memory, as they affect our historical memory [1], can be a useful and topical contribution for historians dealing with the representations of major events of the 20th century.

The focus of the research is the online news published in connection with the Treaty of Trianon and the Hungarian Revolution of 1956. I have carried out introductory analysis to ensure source criticism and provide the basis for a more in-depth exploration of the content. The temporal frequency of topics, the proportion of known and unknown authorship, the hyperlink structure, or the length of texts are telling data in themselves. I used archived versions of online news articles produced by the Department of Digital Humanities (ELTE) in the form of raw (WARC) and curated datasets (TEI XML) covering more than twenty Hungarian news portals [2]. For filtering, calculations and visualization I used my own Python scripts.

The results suggest that there is increased interest in the above-mentioned topics during key periods (i.e. anniversaries, commemorations). Compared to the average article, it is also clear that the commemorative texts were published in much longer form. The trend of articles with marked authors is more influenced by the underlying attitude of the portal than by the theme. Based on the proportions of the number of articles related to the different commemorations, a network can be created, with some of the portals appearing to be organized into more coherent groups. The more general aim is to summarize the major lessons learned from using less conventional sources.

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Keywords: digital history; media memory; archived web

New (Anti-)Political Generation? Large-N survey data about the Hungarian Two-tailed Dog Party's in generational context

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The Hungarian Two-tailed Dog Party (MKKP) has become an organic part of the Hungarian party system in the last few years. The MKKP is considered a joke and anti-establishment party. However, they did not gain any position in the Hungarian parliament at the last general election. The MKKP attempts to introduce a new organization strategy with community organizing, which is based on the collective action. Because of the work-based, anti-establishment and anti-political behaviour of the MKKP and the Hungarian youth's anti-political attitude, our presumption is: the advocates of MKKP are over represented in younger generation.

Our aim is to support our research and place the supporters of MKKP in generation context. Our survey (N=7537) attempts to answer the question what do the supporters of the MKKP think about their party and about other Hungarian parties, and how they describe the attributions of the joke party. The differences induced by the generational cleavages are becoming more and more cardinal phenomena in the Western societies. Thus, the presentation attempts to identify these characteristics among the advocates of the MKKP through the way they are thinking about the traditional establishment parties.

Keywords: Hungarian Two-tailed Dog Party, generation, anti-political, survey

Catalan language rights from the perspective of education policy

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The protection of minority languages and cultures is an important task, as their disappearance could jeopardize Europe's cultural heritage. The situation of a group living in a minority within a given state is greatly influenced by the language policy of that country. Language policy is a double-edged sword. On the one hand, it can promote the use of a particular language, and the protection of the rights of language communities.

On the other hand, it can become a means of assimilation, forcing the exclusion of a language within a given state. This study focuses on the Autonomous Community of Catalonia. The aim of this study is to provide a comprehensive picture of Catalan language and education policy. The Spanish Supreme Court recently made a judgment on a policy of so-called „language immersion” that has led to an ongoing political debate. The controversial court decision that disrupts the current educational model raises a number of issues on which the study focuses.

Keywords: language policy, education policy, Catalan minority, minority protection, language immersion

Processes and continuities in the rural self-governments

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In the centre of my interest there are the historical and modern self-government of the Hungarian villages. At the last year I had a chance to take part in a research organized by the Research Institute and Archives for the History of the Hungarian, led by Ferenc Bódi, which aimed at the period of change of regime and the born of the Hungarian self-government in the rural areas. I was doing empirical research with rural mayors, who have held office continuously since 1990. The examined settlements included more or less successful, small and large villages and small towns located in Bács-Kiskun, Somogy and Baranya counties. Based on the results, I followed further empirical researches in Baranya County. I used the method of the grounded theory, and I follow the perspective both of ethnography and political science. The emphasized themes of the interviews are the personal experiences, motivations, and the social embeddedness of the mayors. Despite of the subjectivity and diversity of these experiences, the results help to understand some socio-cultural determinations of modern Hungarian rural local governments.

A lot of study tries to interpret the meaning of the peasant society at 20- 21st century. It's a question whether we can talk about peasantry in the 21st century. We don't have a uniform definition. Today the disappearance of the peasant society is an international accepted fact. The modernisation of the agriculture has led to the de-peasantisation in Europe at the end of the 20th century. This process has also structural, cultural, and social meaning, too. (Imre Kovách) Anyway, we can speak no longer of peasantry as a dominant social group. But some elements of peasant mentality are reviving after the change of regime, in spite of it means only connection to the traditional way of life, but not relicts. Based on my fieldwork among the long-standing rural mayors, methinks that the traditional peasant values often appear in the self-government of the villages.

Keywords: rural society, self-government, mentality

**SZEMÉLYISÉG-, EGÉSZSÉG-
ÉS KLINIKAI PSZICHOLÓGIA
PERSONALITY, HEALTH
AND CLINICAL PSYCHOLOGY**



Maternal socio-demographic factors associated with symptoms of depression and anxiety in mothers of one-year-old children

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Our research aims to explore the relationship between socio-demographic variables and emotional distress in mothers with one-year-old children.

Our study included 247 mothers ($M[\text{age}]=32,43$; $SD=5,48$) of one-year-old infants selected from the Growing Up in Hungary (GUH) birth cohort. Maternal symptoms of depression and anxiety were recorded in the first three waves of the GUH (28-32 weeks prenatally, 6 and 12 months postpartum). We assessed mothers' emotional distress by adding their symptoms of depression (CES-D-8) and generalized anxiety (GAD-2) at each wave. Maternal socio-demographic variables (age, education, relationship status, parity, family income, settlement type) were collected from the second wave of the GUH.

Mothers were clustered into two groups according to their levels of emotional distress at each wave: one cluster included mothers ($n=187$) characterized by low distress, while the other cluster of mothers ($n=26$) had a higher level of distress across the three waves. According to our statistical analysis, mothers with lower family income are more likely to have stable high emotional distress than mothers with higher income. No significant relationship was found between other socio-demographic variables and symptoms of emotional distress.

Kulcsszavak: maternal emotional distress, maternal socio-demographic factors, Growing Up in Hungary

II-es típusú diabéteszesek diabétesz distressz és adherencia vizsgálata, a koronavírusjárvány idején

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Elméleti háttér

A cukorbetegség nagyon gyakran érzelmi distresszt okoz, melyet betegségspecifikusan diabétesz distressznek hívunk. A cukorbeteg esetében ez a negatív érzelem azonban nem „csak” pszichés jóllét kérdés; ezek a betegek rosszabb adherenciával, rosszabb glikémiás kontrollal rendelkeznek, és körükben magasabb a halálozás előfordulása is. A krónikus betegségben szenvedők, így a cukorbeteg is, sebezhetőbbek a COVID-19 fertőzéssel szemben, és esetükben megnövekedett a komplikációk és a mortalitás esélye is. Kutatásunkban a COVID-19 és a korlátozások okozta hatásokat is vizsgáltuk: felmértük, a pandémia hogyan befolyásolja az aggodalmakat, a diabétesz distresszt, és hogy ez jobb vagy rosszabb adherenciával társul-e.

Vizsgálati módszer

Keresztmetszeti vizsgálatunk az aktuális helyzetre való tekintettel online platformon zajlott. A kérdőívek magukban foglaltak szociodemográfiai kérdéseket, COVID-19 fertőzéssel összefüggő kérdéseket, diabétesz distresszel, kezelési és életmód adherenciával kapcsolatos itemeket. A kérdőívet 252 fő töltötte ki. A vizsgálatban gyűjtött adatokat anonim módon, csoportszinten, SPSS programcsomag segítségével elemeztük.

Eredmények

A diabéteszrel összefüggő distressz és a Covid-19 szorongás pontszámai között pozitív, gyenge erősségű korreláció áll fenn ($\rho=0,250$, $p<0,001$). Az életminőség és a Covid-19 szorongás között gyenge, negatív korreláció áll fenn ($\rho=-0,286$, $p<0,001$), azaz, ha valaki jobbra értékeli az életminőségét, kevésbé fél a koronavírustól. A magasabb koronavírus-szorongás enyhe pozitív összefüggést mutat az adherenciával ($\rho=0,131$, $p=0,038$). Érdekes, hogy a diabéteszrel összefüggő szorongás és az adherencia nem mutatnak összefüggést, tehát, ha a beteg jobban szorong a cukorbetegsége és annak szövődményei miatt, attól még nem lesz jobb az adherenciája.

Diskusszió

A Covid-19 járvány negyedik hulláma csak enyhe, statisztikailag nem jelentős mértékben növelte a cukorbeteg szorongását. A betegség-specifikus distressz és életminőség konstrukciók érvényességét látszik alátámasztani a Covid-19 szorongással mutatott fordított kapcsolatuk. Míg a distressz pozitív, addig az életminőség negatív összefüggésben van a Covid-19-cel kapcsolatos szorongással. Ezek az összefüggések azért figyelemre méltóak, mert egy betegség-specifikus distressz- és életminőségskála, valamint egy járványspecifikus szorongáskála pozitív együttjárását mutatják, ami nem magyarázható a három skála tételeinek tartalmi átfedésével.

Kulcsszavak: Pandémia, cukorbetegség, diabétesz distressz, adherencia, életminőség

Anyai részvétel az anya-gyermek közti morális tartalmú párbeszédekben és a gyermek proszociális viselkedése

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A kisgyermekkorai moralitás fejlődésének kutatásában meghatározó irány a szülő-gyermek párbeszéd vizsgálata. A szülők a mindennapi kommunikáción keresztül kalauzolják a gyermeket a szociálisan elfogadható viselkedések felé, így az általuk alkalmazott kommunikációs mód jelentős lehet a gyermek morális fejlődésében. Kutatásunk célja annak feltérképezése, hogy a gyermek amorális cselekedeteiről szóló párbeszédekben a szülő kommunikációs stratégiái milyen szerepet töltenek be a gyermek segítő viselkedésének alakulásában.

Vizsgálatunkban 36 szülő-gyermek páros vett részt. Az adatfelvétel két részből állt. A szülő-gyermek párbeszéd során arra kértük a diádot, hogy közösen emlékezzenek vissza és beszélgessenek két helyzetről: amikor a gyermek rosszul és amikor jól viselkedett. A rossz cselekedetről szóló párbeszédet az anyai megerősítés, tagadás illetve a gyermek válaszána ismétlése kód kategóriákkal vizsgáltuk. A morális viselkedéseket – segítést és vigasztalást – szemtől szembeni, a gyermek morális viselkedését impliciten hívó szituációkon keresztül figyeltük meg.

A párbeszéd elemzése és az eredmények feltárása jelenleg is folyamatban van. Elvárásaink ezekre vonatkozóan, hogy igazolni tudjuk az általunk vizsgált szülői kommunikációs módok hatását a gyermek morális (segítő) viselkedésére vonatkozóan. Előzetesen azt várjuk, hogy a szülő megerősítése illetve ismétlése a negatív viselkedésről szóló párbeszéd során segíti a morális normák beépülését azáltal, hogy egy biztonságos légkört teremt a gyermek számára, ahol a tartalmak megoszthatók. A negálás ezzel ellentétben gátolhatja az élmények szabad megosztását, felidézését. Ezen elvárásokat a korábbi elemzések és szakirodalmi háttér áttekintésére alapozzuk, melyek szerint ezek a szülői stratégiák pozitív hatással vannak az emlékezeti rendszerek és az érzelemmegértés, érzelem szabályozás fejlődésére.

Kulcsszavak: szülő-gyermek párbeszéd, segítő viselkedés

Health-related personal goals' embeddedness in the self. The role of self-concordance in maintaining and improving mental health

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Introduction: People set goals to maintain and regain their health. Health-related projects are personally relevant aspirations of a person to maintain his or her physical integrity or well-being or to treat or prevent illness.

Aim: Our study aimed to investigate the role of self-concordance in the implementation of health-related goals. In the presentation, interim results will be summarized from the preliminary phase of a longer, longitudinal study with the participation of a clinical sample.

Method: 147 gastrointestinal patients from the Internal Medicine Department of the University of Szeged were recruited during their regular check in the hospital (women: 61.9 %, men: 33.33 %, missing: 4.76 %). Participants' average age was 39.60 years (SD = 12.90). The paper-pencil questionnaire took 30-40 minutes to complete. In the present study the Personal Project Analysis^{1,2} technique and the State-Trait Anxiety Inventory (STAI)^{3,4} were used.

Results: According to the results, positive emotions, higher self-concordance, and self-efficacy are all significantly, positively related to lower levels of state anxiety. According to the multiple linear regression model of state anxiety score, self-concordance and positive emotions were significant predictors of the dependent variable with 43% explained variance in the sample.

Conclusions: A higher degree of goal self-concordance allows the person to better mobilize his or her inner resources resulting in more positive emotions and self-efficacy during the implementation of health-related goals, thus contributing to better mental health. The results draw attention to the importance of health-behaviors' motivational aspects and carry relevant information for chronic patients' disease management.

Acknowledgment: The research was supported by research project no. K 138372, provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund, and financed under the K_21 funding scheme.

Keywords: health-related goals, self-concordance, SDT, goal progress, chronic disease

C. G. Jung és a modern pszichológiai asztrológia

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A 19. század második felében és 20. század elején az Európában és az Egyesült Államokban bekövetkező nagy társadalmi változások hatására számos olyan ezoterikus, misztikus és spirituális irányzat ütötte fel a fejét, ami alternatív utakat kínált az egyetemes vallások dogmatizmusából kiábrándult ember számára. A gyorsan divatossá váló trendek némelyike a korai pszichoanalitikus szerzők látókörébe is bekerült, ezáltal befolyásolva vizsgálódásaik tárgyát és a pszichével kapcsolatos kérdésfeltevéseiket. Carl G. Jung (1875-1961), az analitikus pszichológia atyja különösképp fogékonynak bizonyult a vallásos vagy misztikus élményeket érintő kutatásokra; nemcsak mitológiával, alkímiával és gnoszticizmussal foglalkozott, hanem 1911-től haláláig aktívan érdeklődött az asztrológia iránt is, amit „a pszichológia első formájának” [1] tekintett, és amiről úgy vélte, hogy “nem pusztán babona, hanem (a teozófiához hasonlóan) tartalmaz néhány olyan pszichológiai ténytet, amelyek számottevő fontossággal bírnak” [2]. Vélekedései jelentős hatást gyakoroltak a 20. század folyamán munkálkodó asztrológus szerzőkre, akik közreműködésével a század második felére megszületett a pszichológiai asztrológia ma is ismert formája, ami a korábbi, hangsúlyosan leíró jellegű vagy prediktív asztrológiához képest “dinamikus, folyamatorientálttá és tapasztalati jellegűvé vált, amelyet az önmegértés igénye vezérel” [3].

Az előadásban a pszichológiai asztrológia kialakulásának és fejlődésének fontosabb ezoterikus és pszicho-tudományos előzményeiről lesz szó, avagy a nyugati ezotéria és a dinamikus pszichológia korai történeti összefüggéseiről, a Jung hatást gyakorló teozófus-asztrológus szerzők munkásságáról, a jungi mélylélektant és más, kortárs pszichológiai irányzatokat az asztrológiával ötvöző Dane Rudhyar (1895-1985) “humanisztikus asztrológiájáról”, valamint az 1960-70-es évek kulturális miliójéről, melyben a New Age mozgalmak közbenjárásával a pszichológiai asztrológia elnyerte jelenlegi formáját.

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Kulcsszavak: C. G. Jung, nyugati ezotéria, pszichológiai asztrológia, teozófia, transzperszonális pszichológia

Az öngyilkossággal kapcsolatos ismertek és attitűdök kutatásának szerepe a szuicidológiában - szakirodalmi összefoglaló kutatás

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Az öngyilkosság komplex, emberi viselkedési forma, ami mögött összetett mechanizmusok állnak. Interdiszciplináris tudományterületként a szociológiától a pszichiátrián át a kultúranropológiáig sokféle megközelítést ismerünk, és azt is tudjuk, hogy megelőzésében a társadalom minden szereplőjének egyéni felelőssége és lehetősége van. Ezt a folyamatot befolyásolják azok a tévhitek, mítoszok és érzelmi viszonyulások, amelyek kulturális kontextusba ágyazva tetten érhetők a magyar szuicid szcénában is. Hazánkban, az elmúlt években tapasztalható kedvező változások ellenére továbbra is neuralgikus pontnak tekinthető az önkezű halál, amely a fiatal korosztályban vezető halálokok közé tartozik. A felismerés, hatékony kríziskezelés és a rizikóbecslés sikeressége szintén több tényezőtől múlik, ahol a szakemberek számára eltérő pszichometriai mutatókkal rendelkező becslőskálák és kérdőívek állnak rendelkezésre. Előadásunk célja a megelőzés szempontjából kulcsfontosságúnak tekinthető, öngyilkossággal kapcsolatos attitűdök és ismeretek körében végzett feltáró kutatások, valamint a mindennapi mentálhigiénés segítői és kutatói gyakorlatban használt eszközök komparatív bemutatása. Fel szeretnénk hívni a figyelmet az öngyilkossággal kapcsolatos ismeretek és attitűdök mentén tapasztalható eltérő társas reprezentációkra, különböző társadalmi rétegek vonatkozásában (laikus csoportok, egyetemi hallgatók, mentálhigiénés kapuőrök, stb.), valamint arra, hogy milyen lehetőségek rejlenek a kurrens pszichológiai eszközökkel végzett feltáró kutatásokban.

Keywords: öngyilkosság, ismeretek, attitűdök, prevenció

The importance of close positive relationships in maintaining and regaining health

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Introduction: Nowadays people tend to find it more and more important to set health-related goals. These can range from maintaining your health to treating or preventing an illness. **Aim:** In this study we investigated the role of dyadic coping (i.e., coping with stress with help of the partner) during the progress of reaching one's goal. As a part of a longer, longitudinal study, the following results were based on the data collected in the preliminary phase with the participation of a clinical sample.

Method: Gastrointestinal patients were recruited from the Internal Medicine Department of the University of Szeged during their regular check-up in the hospital (N = 71; Nwomen = 49, Nmen = 17, Missing = 5). They filled out a paper-pencil questionnaire, from which the State-Trait Anxiety Inventory (STAI) and the Dyadic Coping Inventory (DCI) were used in the present study.

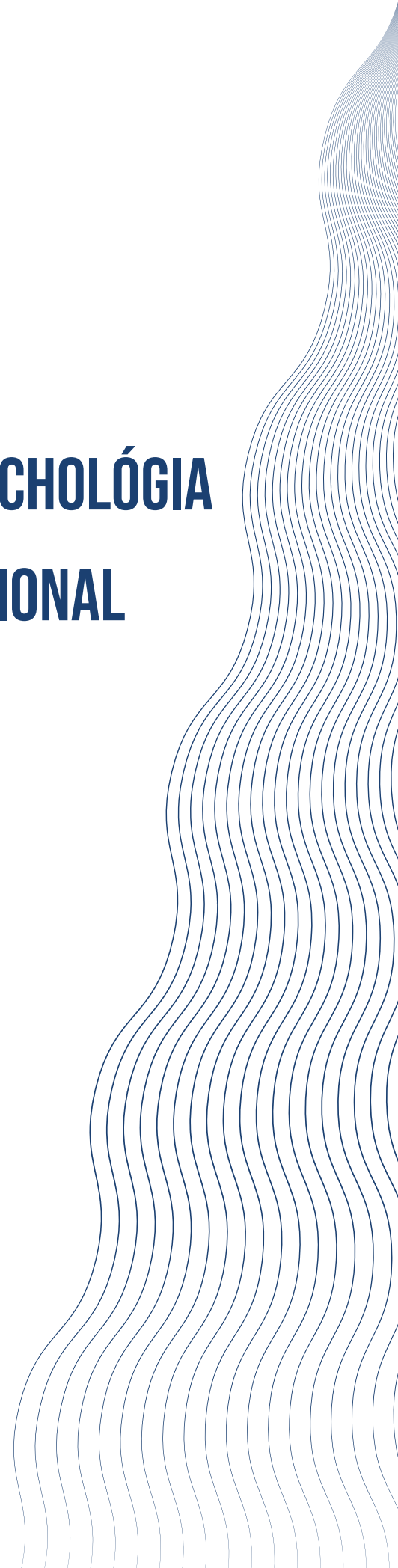
Results: We found that negative emotions and negative dyadic coping of the partner are positively, whereas perceived progress and positive dyadic coping are negatively related to the levels of state anxiety. According to our multiple linear regression model of state anxiety score, negative emotions, negative dyadic coping and perceived progress were significant predictors of the dependent variable with 39% explained variance in the sample.

Conclusions: Negative emotions and the perceived negative dyadic coping from the partner can heighten anxiety levels, while the partner's positive dyadic coping and perceived progress can decrease anxiety levels. The results show the importance of close positive relationships in disease management and their possible effects on one's health-related goals.

Acknowledgement: The research was supported by research project no. K 138372, provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund, and financed under the K_21 funding scheme.

Keywords: dyadic coping, health-related goals, chronic disease, goal progress, anxiety

SZOCIÁL ÉS SZERVEZETPSZICHOLÓGIA
SOCIAL AND ORGANISATIONAL
PSYCHOLOGY



Work stressor-performance relationship

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As work teams struggle to prove they are apt for the job these days, employees are exposed to high levels of stress. The main objective of the study is to evaluate the causes of work stressors and their related effect on the performance and perceived characteristics of employees in industrial parks of Ethiopia. The foremost foe of productivity in today's world is stress [1]. Stress impedes a workforce from reaching its full potential [2]. Stress is the main factor affecting morale, motivation, engagement, initiation and participation. Studying stress in organizations is an urge [3]. Employees are the epicenter of innovation and creativity that needs their psychological and emotional well-being [4]. A descriptive and explanatory Research design will be used. Mainly use quantitative data in facilitating inferential analysis. To describe a situation a mean scale as a measure of central tendency will be used. Correlation and multiple regression will be implemented to measure the interrelationship of variables. In determining the sample size, the random probability sampling technique will be placed. To meet the required data collection for analysis, primary data will be collected using a structured questionnaire distributed to respondents online through Google Forms. The expected results may show a positive relationship between Occupational stresses and Performance. Despite positive and strong associations, the socioeconomic state of affairs that exists in the community may influence people's perception of stress and its degree of optimality in different ways. People may have developed a great coping strategy and stamina that stem from the very innate nature of the cultural and economic makeup of society.

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Keywords: Stress, Psychosocial-risks, Physical environment, role-ambiguity, Performance

Academic Burnout during the COVID-19 Pandemic

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Introduction: Covid-19 pandemic has led an unprecedented impact on the academic life. Graduate students and researchers have been facing challenges that directly impact their mental health, such as the development of academic burnout 1,2. Burnout is described as a psychological disorder that emerged as a response to chronic emotional and interpersonal stressors in the working environment, composed of emotional exhaustion, depersonalization and reduced personal accomplishment 3. Aim: This study aimed to present the preliminary results from my thesis and research topic about Academic Burnout and the risk factors among graduate students during the COVID-19 pandemic. Method: For this study, a cross-sectional analytical descriptive research was performed with PhD/DLA and master's students, across universities in Hungary and others European countries. The Copenhagen Burnout Inventory Student version was used to evaluate the Burnout Syndrome as outcome. Results: A total of 519 students were evaluated. Mostly were female (70%), single (55%) and from European countries (56%). Among the academic factors, 52% never thought about quit the university, 51% didn't know that their university has a psychological/counseling service, and 45% didn't know if their university has extracurricular activities during covid-19. The academic burnout was found in almost 35% of the students evaluated. Conclusions: This study is extremely relevant not only to assess the impact of the Covid-19 pandemic on the mental health of students and researchers but also to know their challenges faced, exploring the explore determinants of development of the e burnout syndrome, and contribute appropriate risk factors measures.

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Keywords: Burnout Syndrome; coronavirus pandemic; academic burnout; graduate student; mental health

Predictors of taking the mentor role in a high school mentoring program Preliminary results of a longitudinal study

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A recently introduced mentoring program at a Hungarian high school provides the context of the research. The study aimed to discover, what makes high school teachers take the mentor role.

The classical roles of teachers are revalued in today's educational context: from a formal, informational transfer role to a supportive, collaborative, facilitator mentor- role (Powell, 1995). School mentoring positively impacts students' confidence and performance (O'Sullivan et al.2017), therefore schools and students are both interested in encouraging teachers to take the mentor role.

On the other hand, constructed social spaces show unique characters (Schein, 2006). To understand the culture, we need to observe the behavior and the creations of their unique reality through meanings (Alvesson, 2002). A newly introduced development program (like a mentoring program) can shape the perception of organizational culture; however, the characteristics of a given organizational culture will also influence how a new program can be integrated into an existing system.

Aim of the study: This study is aimed to carry out a 360-degree evaluation of the mentor role from different levels in the school organization. The central question of our research is: What makes teachers take the mentor role in a high school mentoring program?

Methods: Mentors (N=16) and teachers with non-mentoring roles (N=14) from a high school were participating in a longitudinal study. A questionnaire package was completed by the participants, measuring their personality traits (Réthely S., 2003, Big5 Inventory), organizational well-being (Nistor K., 2015, COPSOQ II.), and organizational culture perception (Sarros, 2005, organizational culture profile questionnaire).

Results: Teachers showed higher expectations about the requirements of the mentor role than students.

Mentors and non-mentors showed no significant difference according to their personality traits. Regarding well-being and organizational culture, significant differences were found between the two groups. Mentor teachers showed lower levels of organizational well-being and a more negative cultural perception than non-mentors. Mentors seem to achieve very high levels of stress and burnout, even higher than non-mentor teachers.

Conclusion: Mentor teachers showed lower levels of organizational well-being and a more negative cultural- perception than non-mentors. Besides these differences, mentor teachers are more affected by psychosocial risk,

Keywords: mentorprogram, organisational culture, pedagogy

Examining the relationship between workplace bullying and organisational culture

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Mobbing or workplace harassment is a situation in which an individual is subjected to continuous and prolonged insults and abuse at work. It usually starts with a conflict that develops into a psycho-terror and the victims are subjected to regular attacks. Although mobbing has a fairly large international literature, its research in the domestic context is in its infancy.

Therefore, the aim of our research was to adapt the NAQ-R questionnaire, which is associated with Einarsen and his colleagues, into Hungarian, and the results are very promising for the future.

The study involved employees (n=209) who were asked to fill in a questionnaire package which, in addition to the mobbing questionnaire, included questionnaires related to organisational well-being and outcomes (e.g. Denison's organisational culture questionnaire, burnout, workplace stress).

Our first analyses show that our questionnaire measures well and, in line with the international literature, workplace bullying is strongly associated with both well-being and work-life balance, stress and turnover - results that are certainly not unrelated to the negative events of the past year.

Keywords: mobbing, pandemic, organizational psychology, burn out

THE IMPACT OF PRESENTEEISM AND PROCRASTINATION ON JOB SATISFACTION WITH MODERATING ROLE OF WORK ENGAGEMENT AND PERCEIVED ORGANIZATIONAL SUPPORT

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Organizations, these days are focusing more and more on employee well-being and employee efficiency. And there are several factors that create hindrance for employees to perform optimally. If you have ever delayed a task deliberately, then you have experienced procrastination (1). Another phenomena that is impacting organizations adversely is presenteeism. Several studies recognize that work engagement and job satisfaction are two distinct constructs, yet positively associated with one another (2). In fact, engaged employees also tend to be more satisfied with their job and procrastinate less (3).

This study aims to investigate the impact of presenteeism and procrastination on job satisfaction by using work engagement and P.O.S as a moderator. Employees from multinational companies in Hungary will be selected through random sampling and will be distributed questionnaires.

Results: The expected results will show that procrastination and presenteeism have a substantial negative effect on job satisfaction. Also we expect to witness, that both the moderators i.e. perceived organizational support and work engagement will the effect between presenteeism and job satisfaction, and procrastination and job satisfaction.

Conclusions: The study will shed light on the factors that are affecting job satisfaction on a daily basis and how it can be improved. Also corporate sectors, academia as well as the public sector can benefit from this research by minimizing the impact of procrastination and presenteeism through development of smart employee engagement strategies.

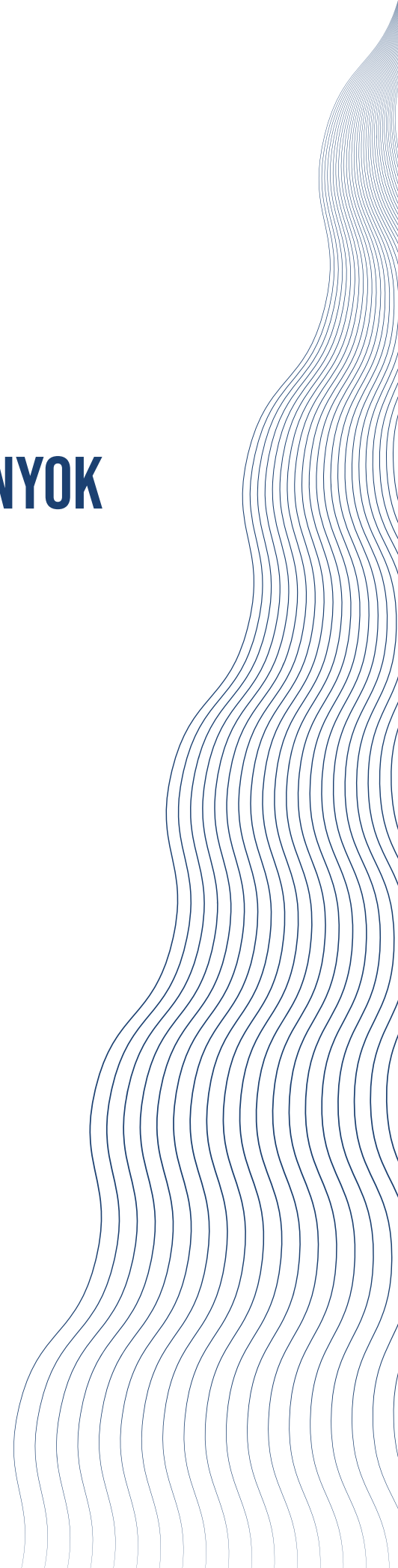
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Keywords: Whistleblowing, Ethical Leadership, Public Sector, Organizational Identification, Locus of Control

TÁRSADALOMTUDOMÁNYOK

SOCIAL SCIENCES



Examining the validity and reliability of generalized trust measuring

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Trust is a field of research in social sciences that has complex, well-developed theoretical approaches, but its empirical tools are less established. The most common survey tool for measuring generalized trust is a formula often referred to in the literature as “standard” trust question, which reads as follows: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”. The aim of the dissertation is to examine this standard survey item along the dimensions of reliability and validity. In my analysis, I use Hungarian data obtained from various international surveys. My results indicate serious validity problems, as the standard question shows only weak linkage with additional variables, which, based on the conceptual background, should be in a close relationship with trust. The question arises, however, as to whether generalized trust, as a personal and social phenomenon, actually exists, whether the concept is worth dealing with, and, from the point of view of methodology, whether we can say that the standard trust question used to measure generalized trust works properly. In any case, the number of critical observations appearing in the literature in connection with measurement is increasing, some of them raise theoretical concerns and others are very critical of the methodology. The starting point of my own endeavors is theoretical in nature too, and does not merely shed light on the methodology issues in connection with the measurement of trust. I’m showing this through the European societies with the use of the biggest survey databases. In the countries examined in general the results support the view to be found in the literature, however, in the case of the countries of Central Eastern Europe the relationship between trust and trust functions is not as one would expect, especially in the case of Hungary.

Keywords: generalized trust, measurement, validity, reliability

Lunacy, normalcy and cleverness in a Southern Hungarian animal shelter

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My presentation investigates local emic notions of lunacy, normalcy, and cleverness in a Southern-Hungarian small-scale animal shelter setting. Based on data taken from participant observation and a number of qualitative interviews I will argue that local notions on the mental qualities of animals can sometimes form the basis of human-animal relationships. I assume that there is a continuum of animal thinking capacity from lunacy through normalcy to cleverness which informs the strategies of animal care. There is a traditional focus in animal shelter ethnography on the emotions and moral conflicts (Arluke 1991;1994) that animal shelter workers go through in doing the “dirty work” of animal euthanasia (Tallberg, 2014), or on the creation of animal personhood, especially on the ascription of an always good, a priori positive animal personhood (Taylor, 2007; 2010). Inspired by Paul Shepard’s work on the importance of thinking about animals’ mental qualities in the formation of human intelligence (Shepard, 1978), I will diverge from these important scholarly approaches, as the central theme of my paper will focus on animal cognition, and the importance of caretakers’ idea of animal lunacy, normalcy, and cleverness in deconstructing, or maintaining and building social relationships with animals. I will also argue that the main purpose and function of an animal shelter is not merely the adoption of rescue dogs, but the production of a certain type of ideal family dog that can be then deposited in an ideal human environment, the loving family. Understanding and even changing certain mental qualities and behaviours of rescue dogs is a crucial part of the process of creating sociable creatures that can take their place beside their human masters in society. Animal shelter work then can be understood as what Béla Gunda describes as a “domestication effort” (Gunda, 1975) In the final part of my presentation, I will examine how these mental categories of lunacy, normalcy and cleverness are applied to other humans as well, to society in general, and to the anthropologist himself.

Keywords: human-animal relations, animal cognition, domestication

Young people and the social welfare system

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In Hungary, starting from a young age, children and young people are part of the social welfare system. Their lives and development is monitored and in case it's necessary, the system gets involved. Its main aim is to protect children. However, when children leave school, which they are allowed to do from the age of sixteen, occasionally they become invisible to the welfare system. The main purpose of my research is to find out what happens when the system is no longer behind the young people who need it the most, the disadvantaged youth. The primary method of my research is interviews conducted with professionals who work with young people in social welfare institutions. I aim to uncover all the points where children at risk encounter the system, and what kind of help they get if a problem occurs in their lives. Moreover, I am going to explore their institutional trust and how they are able to cooperate with the system. Finally, I would like to analyse their opportunities in the labour market and give suggestions on improving their chances in life.

Keywords: youth; welfare; social policy; disadvantaged youth

Consumers about consumers: what do we think about those who use electric cars?

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Mobility plays a decisive role in our everyday life. It does matter how much time we spend with traveling, and it does matter how do we absolve our daily traveling routine. The developed, increased and constantly growing demand has created various types of transportation that help this action. In the meantime, we are constantly using the resources provided by nature to manufacture and operate these vehicles used for transportation, and we are constantly polluting and burdening our environment. At the same time, there are already existing solutions that try to fully satisfy our mobility needs, even if these solutions are slightly limiting us compared to the traditional methods. The solution that currently seems to be the least polluting is the electric car. Although it is spreading in different scales, but its' number is constantly increasing around the world. Their spread is influenced by multiple factors, even the consumers themselves are not always convinced that this is a satisfactory solution, however the use of this alternative solution does surely reduce air pollution in our cities. The question arises as to what we think about electric car owners in general, what characterizes those consumers and their consumption, who choose this form of everyday mobility. This is the research question what is examined in the study, which is based on an online survey of a representative sample of the Hungarian adult population of 1000 respondents in August, 2022. During the survey, the attitudes toward electric cars and electric car owners is also examined, including the explanatory variables of sustainability aspects.

Keywords: mobility, electric car, sustainability, consumer behavior

Political correctness, inclusiveness, tokenism - the emergence of 21st century social processes in modern video games

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Introduction: In recent years, the terms political correctness, inclusivity, and social justice can be heard more and more in Western countries. Broad social movements have emerged behind these expressions, that are now able to bring about changes in all areas of life. This includes politics, education or even pop culture, such as movies, TV series or video games.

Aim: In our research, we investigated how these social processes are manifested in and affect today's modern video games. To this end, we looked for signs of this in recently popular video games, changes in their content, which can be connected to the effects of the above-mentioned social processes. These include visual content, appearances, and changes in the story/lore of the given games, or even other content implementations

Results: Our results show that the examined video games strongly reflected the mentioned processes, the developers tried to adapt to them and change the content elements of the games accordingly. It is important to emphasize, however, that in the case of different video games developers and publishers may do this in different ways and with different underlying motivations.

Conclusion: In my presentation, I examine how the video game industry, like many other pop cultural media, provides another platform for the delivery of non-game (even ideological) messages to a wider audience.

Keywords: political correctness, inclusiveness, tokenism, video games

Creative concept for maintaining workplace health

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Introduction: The primary objective of the EU's 2020 strategy is to make the economy sustainable, with a particular focus on increasing the number of people in active employment, so that the employment rate of working-age people aged 20-64 reaches 75%. It is important to underline that Europe is characterized by an aging society, so the key to increasing employment now lies in keeping workers active for as long as possible, primarily through their health status (Braun et al., 2015.; European Commission, 2014). The health of workers depends on several factors, from the physical environment to the design of the workplace (comfort factors: lighting, ventilation, temperature, noise). Furthermore, the physical factors of the workstation, i.e. whether the workstation is ergonomically designed (possibility to adjust desks, chairs, monitors, possibility to stand up, accessibility), and psychosocial factors such as stress, burnout, mental disorders, etc (Lima - Coelho, 2011).

Objective: In addition to health promotion, it is also important to avoid accidents and illnesses at work, which can be addressed, among other things, by the design of office spaces. The additional costs resulting from absenteeism, illnesses, and accidents at work can be reduced by a well-thought-out concept (Helander et al., 1988.; Robertson et al. 2012.; Straker et al., 2009).

Method: Our research team developed a complex solution proposal that was examined from architectural, health, economic and technical perspectives. A mixed methodology was used: a literature review, a questionnaire survey, a field study, and case and control groups were set up.

Results: The program can be used to formulate simple interior design recommendations that can contribute to improving the health of workers with low investment. Once validated, our Creative Concept can be used as a multi-component workplace health promotion method to help a wide variety of offices to develop a health-promoting work environment.

Conclusion: Currently, due to the effects of the pandemic and the Russian-Ukrainian war, office space is a priority area of research. However, there is a need for employers to rethink office space by creating a safe, more productive working environment where employees can work individually or in groups, and by creating appropriate social spaces where employees can recharge and thus achieve an overall work-life balance that contributes to the success of the company.

Keywords: workplace health, health promotion, computer workstation ergonomics, office spaces, well-being

Social Media Interventions on Study-Abroad Challenges among Stipendium Hungaricum Scholars at Selected Public Universities in Hungary

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Study abroad opportunities come with complex challenges causing shock and stress among students. Stress accumulates into depression with time. Affected students occasionally resort to drug abuse, criminal activities and often death through suicide. Provision of guidance and counselling services can be efficiently aided by ICT use through social media platforms specially created for different groups. This research will contribute to the existing body of knowledge by examining the role of social media counselling in addressing the challenges faced by Stipendium Hungaricum Scholarship holders while studying in Hungary. The specific objectives of the study are: to evaluate the role of WhatsApp on personal guidance and counselling among students, to determine the contribution of YouTube in vocational guidance and counselling, to establish the role of Facebook in educational guidance and counselling and to identify attributes of an effective social media platform for guidance and counselling among students. This study will inspire all institutions to fully utilize social media in their guidance and counselling services. This research will be guided by Albert Bandura's social learning theory. The respondents will comprise randomly selected students from four public universities in Hungary namely; University of Pecs, University of Debrecen, Corvinus University of Budapest and the University of Szeged. Descriptive quantitative research design will be used. Data will be collected online and processed using descriptive and inferential statistics aided by SPSS.

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Keywords: Study-abroad, social-media, educational-guidance, personal-guidance, vocational-guidance

TERMÉSZETTUDOMÁNYOK I. SCIENCES I.



Quantum mechanics in physics teacher education

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There is a consensus on the importance of teaching/learning quantum mechanics in teacher education, but the way to implement this can vary widely depending on the goals. We have to teach the current, traditional secondary school curriculum, which includes wave-particle duality, bound states, and so on. But it is also worth preparing students for the second quantum revolution, which is about quantum computations. Approaches based on two-state systems not only provide an alternative foundation but also an introduction into quantum computations. They are also beneficial because educational researchers have already explored the power of two-state-system-based approaches such as the Dirac polarization approach in secondary school. So, applying two-state approaches can bring quantum computation closer, prepare the general formalism of quantum mechanics through illustrative examples and provide a new pedagogical insight in secondary school. In the semesters 2021/22-1 and 2022/23-1 a physics education experiment is performed using Dirac polarization approach. In this presentation proposals are presented for integrating this approach into teacher education. It is shown how the formalism of quantum mechanics can be adapted to the students' prior knowledge, and extra topics can be added bridging the gap between secondary school and university.

Keywords: Quantum mechanics, physics education, two-state approach, polarization

Two Dimensional Electromagnetically Induced Grating Via Spontaneously Generated Coherence and Nonlinear Kerr Field Through Doppler Broadened Medium

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The study of electromagnetically induced grating (EIG) has been an active topic of research in optics in recent years due to its prospective applications in switching and routing of light, optical storage, self-imaging, and dipole soliton with four-wave mixing.

We study electromagnetically induced grating in the presence of a non-linear Kerr field, two-dimensional intense stationary waves to induce spontaneously generated coherence (SGC) through the N-type Doppler broadened atomic configuration. Kerr field and SGC can control the transmission and two-dimensional diffraction intensity of the probe light through cold and thermal atomic mediums. Multiple transmissions and two-dimensional intensity peaks are increased by altering the Kerr field and SGC through Doppler broadened medium.

Keywords: quantum optics, quantum technology, electromagnetically induced transparency, electromagnetically induced grating, Kerr field

Few-cycle Lithium Niobate Based THz Sources

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Single cycle THz pulses can be generated in lithium niobate crystal (LN) with high efficiency by optical rectification of ultrashort laser pulses. In some of the applications, for example certain electron accelerator schemes, multicycle THz pulses can prove to be more advantageous than single-cycle ones. Recently many publications have appeared on multicycle THz generation, however, little emphasis has been placed on the THz waveform. In any physical process where the field strength of the light pulse plays a role, the controllability of the temporal shape of the field strength is crucial. In this work, with the help of numerical calculations, we show the degree to which the temporal shape of the field of the generated THz pulses can be controlled.

Two cases are considered as materials for optical rectification: congruent lithium niobate (LN) and periodically-poled LN. Two optical pumps were also considered: narrowband, and chirped broadband. The characteristics of the generated multicycle THz for all four cases were obtained. Graphs drawn from the simulation results show better pulse shape for the case of ppLN and chirped case, but higher efficiency for the case of congruent LN with narrowband pumping.

Keywords: THz, multicycle, lithium niobate

Sulfur containing amphiphilic polymer conetworks

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In the past few years, sulfur-containing polymers have gained increased interest due to their advantageous properties which make them useful for a wide range of applications. Due to their versatile properties, both chemical and physical, sulfur containing polymers have been investigated for several application fields, such as sensors, controlled drug release matrices, new biomaterials etc..

The main purpose of our research is the systematic investigation of a series of novel classes of amphiphilic polymer conetworks (APCNs) based on polymers with sulfur containing polymer component. Amphiphilic polymer conetworks (APCNs) are composed of both hydrophilic and hydrophobic polymer chains linked by covalent bonds to each other. In the course of our investigations, a special acrylate-telechelic P(DODT-co-PEGDA) copolymer was used as macrocrosslinker in the polymerization of the other monomer, methyl acrylate or styrene.

The P(DODT-co-PEGDA) copolymer was synthesized by simultaneous addition and oxidative coupling of thiols.[1] This type of reaction shows the features of green chemistry, because of the convenient reaction conditions, that is, ambient temperature and pressure.

The synthesis of the conetworks was achieved by the free radical copolymerization of the P(DODT-co-PEGDA) macrocrosslinker with a small molecule comonomer, either methyl acrylate (MA) or styrene. Two series of conetworks were synthesized successfully by this method with systematically varying the P(DODT-co-PEGDA) macrocrosslinker content. Then, the samples went through extraction, drying, and their characterization was carried out.

[1] Szabó, Á.; Szarka, Gy.; Iván, B. manuscript in preparation

Keywords: amphiphilic, polymers, conetworks, thioether

Prediction of nanoparticle size distributions based on nucleation-growth type models

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A family of nucleation-growth type kinetic model describing nanoparticle formation is analyzed in this contribution based on both the deterministic and stochastic approaches to chemical kinetics. The model starts from monomer units, n of which combine in a seed formation reaction. Second-order particle growth between a particle and a monomer unit follows, the rate constant of which depends on the size of the growing nanoparticle in a way that is given in a kernel function. Four different kernels are considered: diffusion kernel (size independence), Brown kernel (direct proportionality to the linear size), surface kernel (direct proportionality to the surface), mass kernel (direct proportionality to the volume or mass). The two main parameters of the model are the minimum size of the viable seed (n) and the ratio of the growth and nucleation rate constants. Because of the large number of variables, this model cannot be handled by the common methods developed for the numerical integration of kinetic differential equations. Various specific approximations had to be developed for giving final results that are comparable with experimental observations. Exact analytical solutions could be derived for the time dependence of the concentrations of all different kinds of nanoparticles, as well as the cube-root number-average size of the nanoparticles in three cases, plausible approximations are used for all other types of models. The approximations give closed, explicit formulas for describing the time dependence of the average sample size in each of these instances. These explicit formulas are compared with the results of simulations using the Gillespie algorithm and this is applied for different kernel functions, as well. An interesting aspect of this system is that the very high number of different species guarantees that the individual concentrations or particle numbers are extremely low, yet the deterministic approach still gives a description that seems acceptable for interpreting experimental results, so in fact there is no need to employ the more demanding mathematics of the stochastic approach. With these approximations, there might be a chance to obtain the full size distributions in these types of models.

Keywords: nucleation kinetics; kernel function; nanoparticle growth; symbolic solution, autocatalysis

Sustained release micelle-alginate composites containing antidiabetic drugs**Sipos Bence¹, Beni Márk¹, Csóka Ildikó¹, Katona Gábor¹**¹University of Szeged, Faculty of Pharmacy, Institute of Pharmaceutical Technology and Regulatory AffairsE-mail address of the first author/ presenter: sipos.bence@szte.hu

Oral drug delivery faces many challenges in its current therapeutical applications. Modified drug release systems are of paramount importance, where drug liberation and absorption can be modified by various technological methods. However, this does not solve the solubility and permeability issues, which can be improved by nanomedical solutions, such as polymeric micelles.

Our goal was to formulate pioglitazone-loaded polymeric micelles which would be encapsulated into sodium alginate beads alongside metformin hydrochloride via the Quality by Design (QbD) approach for peroral use.

At first, QbD-based risk assessment was evaluated to find the optimizable factors, which optimization process was performed via factorial design. Following the micelle characterization via dynamic light scattering, alginate beads were formulated by crosslinking them with calcium ions, then they were freeze-dried and filled into capsules. Swelling and in vitro drug release studies were performed in simulated gastric conditions.

The optimization was successfully performed after the QbD-based risk assessment process. The polymeric micelles had proper particle size corroborating the size range of polymeric micelles in monodisperse distribution. Spherical alginate beads were formed followed by decreased size after freeze-drying. With proper swelling properties, a floating system was developed. The drug release study revealed that sustained release was achieved via this approach.

It can be concluded that via the utilization of sodium alginate in nanomedical solutions, new and innovative value-added formulations can be achieved.

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Keywords: nanomedicine, sodium alginate, polymeric micelle, antidiabetic

Different electrophoretic approaches in the determination of L-Carnosine in commercial dietary supplement formulations

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Introduction: Nowadays, an incredible variety of dietary supplements are available on the market. Frequently used type of dietary supplements are those that contain amino acids, peptides, or proteins. One of the substantial peptides used among athletes is L-carnosine, which improves endurance during intense exercise and has potential application in disease treatments. However, the safety of supplement products is questionable because of weak law regulations regarding their content. The main drawbacks of commonly utilized methods are high prices, complex and time-consuming sample preparation and analysis. Therefore, there is a demand to develop a new approach for fast, cheap, and simple analysis of amino acids, peptides, and proteins.

Aim: The first part of the investigation included the primary objective of the study, that was development of cheap, fast, simple and environmentally friendly method for determination of L-carnosine in dietary supplements on innovative microchip electrophoresis (ME) technology. In the second part of the study, the samples were analyzed by capillary electrophoresis (CE) - ultraviolet-visible (UV-VIS) detection to compare these two electrophoretic methods in case of dipeptide determination in real samples.

Method: ME analysis was performed on a double-T poly(methyl methacrylate) chip (ChipShop GmbH) MCE device model ET121 (eDAQ) that incorporated ER430 High Voltage Sequencer (HVS) and ER225 C4D system. CE analysis were performed on Agilent Technologies 7100 CE instrument.

Results: Linear detection range were tested from 2.5×10^{-6} to 2.5×10^{-5} M ($R^2 = 0.9801$) for C4D and from 4.4×10^{-4} to 4.4×10^{-3} M ($R^2 = 0.9905$) for UV-VIS. The separation was faster using ME-C4D due to the relatively low retention time on the microchip, which was only 73 s for L-carnosine. In the case of utilizing CE-UV-VIS, the migration time was 13.4 min.

Conclusions: The determination of L-carnosine in two different commercial dietary supplements was accomplished using ME-C4D and CE-UV-VIS methods. Both methods showed insignificant deviations from the labeled concentration of L-carnosine. However, ME-C4D showed slightly lower detection limits and analysis time. Both methods proved to be environmentally friendly, moreover ME-C4D provided lower sample and buffer consumption.

Keywords: L-carnosine, microchip electrophoresis, capacitively coupled contactless conductometry detection, capillary electrophoresis, UV-VIS detection

The steady-state and dynamic model of a H₂S scrubber used for coke oven gas purification

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The intensive rise in energy prices makes it increasingly difficult for energy-intensive industries to remain profitable. In the case of coke oven plants, the impact of rising costs can be moderated by the efficient use of coke oven gas, produced as a by-product of coke production, as an energy source. Therefore, it is important to ensure a constant composition of the coke oven gas and to remove impurities. Existing plants can be greatly assisted by, process simulators built to support gas cleaning technology can be a great help in this task.

In our work, a hydrogen-sulphur washing tower of an existing coke oven gas cleaning technology was studied. Initially, the steady-state simulator of the column was created by using Aspen Plus software and then the impact of operating parameters on the unit was investigated. Subsequently, a dynamic simulator of the scrubber was built using Aspen Hysys process simulator software. Further laboratory analyses were made to validate the model. Building the model is a rather complex task, as the purification of the coke oven gas involves a complex multi-component separation process, combined with numerous parallel chemical reactions.

Keywords: gas purification, model, absorption, steady-state, dynamic

Utilizing an electrochemical method in preclinical research - enzyme based amperometric biosensor

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Introduction: Measuring metabolic processes in the brain with adequate temporal resolution is crucial to understand its function. Based upon the presence of a glucose transporter within the prefrontal cortex, as well as previous studies showing the preventive effect of glucose drinking on the development of posttraumatic stress disorder (PTSD) we hypothesized that brain glucose metabolism, especially in the prefrontal cortical area, plays a crucial role in the development of the symptoms.

Method: To test this hypothesis first we developed a biosensor, which can measure the glucose level within the brain with high temporal resolution. Our measurement method was periodically interrupted amperometry. After testing these microelectrodes in vitro, in vivo measurements were carried out using rats to ensure the biosensors' usability in animal models. In parallel, the peripheral glucose levels were measured by a commercially available continuous glucose-monitoring sensor with its electrodes fixed subcutaneously.

Results: We successfully optimized the size, lifetime and sensitivity of our electrode, which made it suitable for brain measurement in contrast to the commercial sensor (which is too flexible, not focused enough and not sensitive below 2mmol/l). Selectivity was successfully ensured by an electropolymerized meta-phenylenediamine ultrathin layer. Periodically interrupted amperometry provided extra time for the reloading of the diffusion layer resulting in a higher current. Central and peripheral measurements showed the same response to manipulation (glucose or insulin injections).

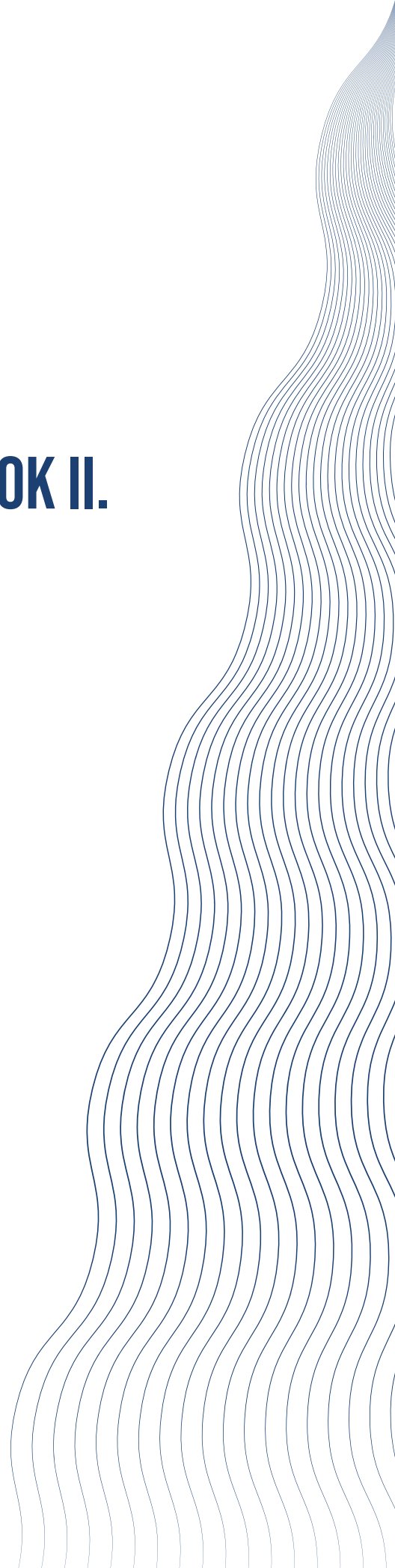
Discussion: Our further research using this biosensor can contribute to the understanding of the metabolic aspects of PTSD, therefore, to improve the efficacy of its therapy. The knowledge gained during development of the biosensor will open a new window for applying this electrochemical method to other projects and animal models. Indeed, this method is a versatile tool for preclinical research, because of the wide variety of possible target molecules (depending on the enzyme used).

The research is supported by PTE ÁOK-KA-2020-10.

Keywords: glucose sensor, microelectrode, electrochemistry, poszttraumatic stress disorder, prefrontal cortex

TERMÉSZETTUDOMÁNYOK II.

SCIENCES II.



Mechanistic Insights into the Regulation of Human Myosin-7a

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Human myosin-7a (Myo7a) is an actin-based motor protein essential for vision and hearing. It plays critical roles in the development and functions of actin rich protrusions such as filopodia, microvilli, and stereocilia. Previous studies using *Drosophila* homolog showed that myosin-7a is a monomeric, high duty ratio motor and can move processively upon dimerization. However, characterization of full-length mammalian myosin-7a has been limited by the difficulty of expressing and purifying stable, intact protein.

Here, we report the production of a complete human myosin-7a holoenzyme in insect cells and study its regulation by intra- and intermolecular mechanisms. Distinct from *Drosophila* myosin-7a which primarily associates with calmodulin, we found that human myosin-7a utilizes regulatory light chain (RLC), calmodulin and calmodulin like protein 4 (CALML4) as the light chain subunits. CALML4 is recently discovered highly enriched in stereocilia and identified as a deafness candidate gene. We show that CALML4 does not bind to Ca²⁺ but plays a key role in regulating the dynamic binding of calmodulin to myosin-7a in response to Ca²⁺ signaling. The cochlea expresses two myosin-7a splicing isoforms differed by a short N-terminal extension. Using combined optical trapping, biochemistry, and in vitro motility assays, we show that the N-terminal extension greatly influences the enzymatic and mechanical behaviors of mammalian myosin-7a. We propose that the hair cell regulates its mechanosensitivity by adjusting the expression levels of the two myosin-7a isoforms. Finally, using single molecule motility assays, we show that purified full-length myosin-7a alone does not move processively on actin in vitro, but in the presence of MyRIP, a known myosin-7a binding protein in neuroretina, it exhibits processive movements. The motor-adaptor complex moves slowly along actin filaments (~ 4 nm/s) with prolonged actin attachment time (~ 150 s).

Together, our results provide new molecular insight into how myosin-7a functions in hair cell stereocilia and neuroretina. The production of intact human myosin-7a protein enables future studies to understand the molecular details of human vision and hearing loss caused by myosin-7a defects.

Keywords: Myosin Regulation

Effect of large invasive mammals on native ecosystems: wild hippos in Colombia

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Mega-fauna species are ecosystem keystones: the African wild hippo (*Hippopotamus amphibius*) acts as a vector for nutrients in its native range, by recycling organic matter acquired while grazing on land as waste in water bodies. Nonetheless, when present in another range as an invasive species, this behavior can be detrimental to the overall health of the new ecosystem, given its alteration of already well-established ecological dynamics. Wild hippos were introduced in Colombia in the 80s and since the escape of three individuals in the late 90s, the population has grown at an estimated rate of 10% per year, due to favorable climatic conditions and lack of enforcement of population control policies, resulting in a current population of more than 100 individuals in the country, with estimations of exponential growth in upcoming years. The exact number and impact derived from this population increase and dispersal is hard to estimate, given the limited geographic access, sociopolitical factors in place, and lack of previous information that allows a comparison of changes in the conditions of the affected areas. Given the severity of dry seasons and the continuous occurrence of droughts in East Africa, hippo's behavior can be beneficial for the overall diversity of the plant and animal species, since it contributes to the ecosystem metabolism by stimulating oxygen cycles in the water and promoting the presence of cyanobacteria, zooplankton, and benthic invertebrate communities. There is a pressing need to identify the specific impacts of the wild hippo's presence in Colombia. We compared the findings of different studies analyzing both the population dynamics of hippos and the impacts of its presence in the Magdalena River Basin, the more wildly invaded range in Colombia, finding that even though the impact of the species is undeniable, additional factors in place, such as cattle ranching, landscape transformation, forest loss, mining, and other extractive activities, might contribute significantly more to the overall ecosystem changes than the hippo population. An extensive set of studies analyzing changes in the soil, landscape transformation, and biodiversity loss due to the presence of hippos in the region is urgently required.

Keywords: local climate strategy, urban climate governance, city ranking, reverse mainstreaming, Hungary

Trait-based responses of zooplankton communities to different warming scenarios

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The prominent aspects of global climate change are the gradual increase in annual mean temperatures and an increased frequency and intensity of extreme heatwaves, which threaten freshwater ecosystems, including shallow lakes. These change stressors can differently affect the taxonomic and trait composition, as well as the functioning of plankton communities, but comparative studies are largely lacking. Therefore, we conducted a four-week-long mesocosm experiment to test the effects of constantly increased temperatures – CW (+3°C) and recurring heatwaves – HW (+6°C) in a setup where both treatments received an identical energy input. As a model community, we used the natural plankton of the large shallow Lake Balaton. We found significantly higher Chl a concentrations in the HW treatment than in the CW and control treatments, during and after the first simulated heatwave. Besides, we found higher zooplankton biomass and a lower ratio between Rotifera and Copepoda than in the HW and control treatments. We also found that HW had a significant effect on zooplankton traits, specifically it was associated with small-bodied taxa. Our findings show that HW can have a more immediate effect on biodiversity and trophic interactions, while the effects of CW become only visible in the longer term, in line with the concept of press and pulse disturbances.

Keywords: mesocosm, shallow lake, plankton, zooplankton, climate change, extreme events, heatwave, press disturbance, pulse disturbance, traits

The role of two-component system inhibitors in the biosynthesis of lipopolysaccharides

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As Gram-negative bacteria, *Shigella sonnei*'s major outer membrane components are lipopolysaccharides. Our project demonstrates the effect of a lipopolysaccharide biosynthetic deficiency on bacterial fitness. The role of lipopolysaccharides goes beyond structural function, thermosensitivity, biofilm-forming ability, antibiotic susceptibility are all related to the proper biosynthesis of these molecules.

In this project, we examined the effects of lipopolysaccharide biosynthetic mutations in *Shigella sonnei*. We used two previously described mutant strains, *S. sonnei* 4351 and *S. sonnei* 4303 to understand how defects in this critical part of Gram-negative bacterial cell wall affect virulence and antibiotic susceptibility. Our comparative genomic analysis complemented with structural data helped us to understand the effect of a specific mutation on virulence and how the analysis of lipopolysaccharide deficiencies serves antibiotic research, leading to reference strains for further examinations.

The LPS biosynthesis process is well-understood to be regulated by several two-component systems (RpoE, PhoP, and BasR related two-component signal mechanisms). The process works in the other direction too, as defects in LPS biosynthesis initiate envelope stress responses and stimulate activation of the RpoE sigma factor through the Rcs phosphorelay system. Novel approaches are sought in developing new lipopolysaccharide targeting antimicrobial agents, targeted against Gram negative bacterial infections. Studies of connections between lipopolysaccharide biogenesis, and known bacterial two-component system inhibitors have the potential to find new antibacterial targets.

The relationship between a lipopolysaccharide biosynthetic gene (*rfaD*) and NtrC two-component system was established before, that may lead to possibilities of influencing the biosynthesis of lipopolysaccharides. While the work shows the limitation of the agent, it also shows the opportunity of a novel application for Closantel-like agents as potent inhibitors for Gram-negative bacteria, to reduce bacterial virulence and provide suitable treatment for common enteropathogenic diseases.

Keywords: Shigella sonnei, shigellosis, lipopolysaccharide, two-component system, envelope stress signal

Temporal water extent trends in hydroperiod of soda pans assessed by remote sensing

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Climate change and anthropogenic activities have profound effects on aquatic ecosystems. In temporary waters, warming, decreased ground water level, unpredictable rainfall intensity may contribute to shorter hydroperiod, which fundamentally affect their biodiversity and functioning. On the long-term, it may even result in the disappearance of such habitats. The aim of this study was to analyse temporal trends in annual average water extent, which is inherently linked to hydroperiod, of soda pans over the last decade. The investigated 6 soda pans are situated in Fertő-tavi National Park (Seewinkel). The wetlands in the region have experienced a dramatic, ~70% decline in number since the 50's due to changing precipitation coupled with groundwater extraction. Based on the analysis of weekly satellite images data (Sentinel 2 and Landsat 8) available for the last decade, we found that the annual average flooded area of the remaining soda pans is gradually decreasing. The observed trends prove our theory of the remaining soda pans, those wetlands may disappear in the following decades. Due to the development of remote sensing and GIS methods, and increasing availability of high-frequency images, there is a possibility to collect sufficient amount of data to predict future changes of soda pans and other temporary waters on the Pannonain Plain.

Keywords: hydroperiod, soda pans, remote sensing

Transport infrastructure developments and geopolitics in Bosnia and Herzegovina

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Bosnia and Herzegovina is one of the most special and the most unsettled countries in the Balkan. The issues are both political and economic. The primary reason of these problems is the ethnical fragmentation which results in conflicts in the whole state operation - on economic, politic, and social level.

This conference presentation will focus on the decision-making mechanisms of the geographical route directions which influence the transport infrastructure developments. The internal interests of the constituent nations are clearly visible behind the decisions, which in many cases are more important than the interests of Bosnia and Herzegovina as an independent state. In many cases the former overwrites rational transport corridors of spatial infrastructure development in the country. The presentation is going to study the infrastructure development plans and concepts of the European Union, the Republic of Serbia and the Federation of Bosnia and Herzegovina. In the analysis it will be important to point out which projects have been executed and which projects are still in conceptional or in the planning phase. There is a sharp difference in the directions of the development's transportation lines among the three constituent nations: for the Serbs and the Croats the main priority is to build links with the „motherland”, while for the Bosnians the integration of the country and thus the realization of economic benefits and opportunities at the infrastructure level are more essential and critical.

Keywords: transport, infrastructure, Bosnia and Herzegovina, ethnic politics

Geopolitics, soft power and borders in South Korea

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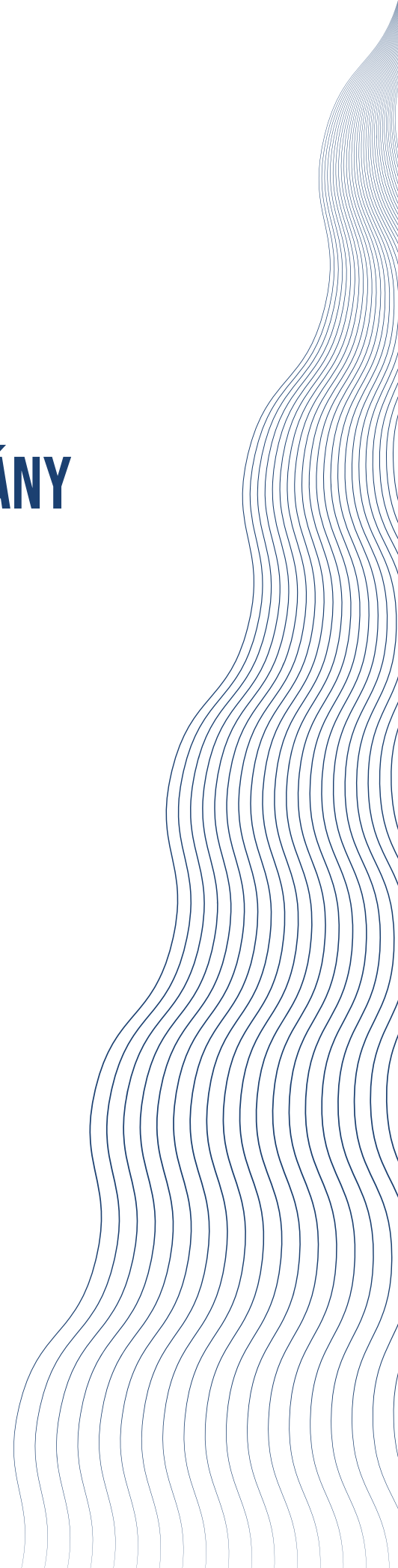
Located in the southern part of the Korean Peninsula, the Republic of Korea is surrounded by powerful neighbours on the Eurasian continent. Despite its admirable economic growth, its international standing is challenged by competitors with significant military forces and hard power, and the country's borders and security depends on the delicate balance of power in the region. Since it cannot extend its regional influence over its borders through traditional methods, it can strengthen its presence in the emerging geopolitical spaces of the 21st century by using soft power to exercise economic and cultural influence.

Key elements of successful soft power include attractive culture, respectable political values, and legitimate foreign policies (Nye). Currently, the global rise of South Korea's popular culture products has significant potential to harness for soft power. The growing international demand in the 'Korean Wave' —coining together South Korean cultural products, such as television programs, films, pop music, and smart devices—contributes to the construction of an attractive image of the country (Hyejung Ju). The overall purpose of the study is to investigate the influence of the Korean Wave, as a means of soft power in international relations, focusing on how the attractiveness of Korean culture can be used to the government's advantage, and the Korean Wave's influence on cultural diplomacy.

Keywords: geopolitics, soft power, border studies, South Korea

TÖRTÉNELEMTUDOMÁNY

HISTORY



The Huszt Hoard of the Hungarian National Museum

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Summary: This research covers a topic related to Islamic coins, The Huszt Hoard of the Hungarian National Museum. In 1904 the hoard was discovered in Máramaros county, in the northeastern part of historic Hungary.

The Huszt hoard is remarkable primarily because it was found at the southwesternmost point of the distribution of ninth-tenth-century Muslim silver coins in Eastern Europe. To this day, no such hoard has been found in the Carpathian basin. The dirhams at the hoard date to the tenth century AD to the SÁMÁnid dynasty in Central Asia, and to the period after the Hungarian conquest of the Carpathian Basin. The hoard was studied by László Kovács (Hungarian), and Aleksey Vladimirovich Fomin (Russian) in 1987, and later by Gert Rispling (Swedish) in 1993.

The new study will discuss recent results of the Huszt hoard Archaeometry examination the dirhams were analyzed using the X-Ray Fluorescence (XRF) technique in The Laboratory for Heritage Science MTA Atomki, Debrecen, Hungary. The X-ray fluorescence (XRF) analysis for the coins allowed us to study the dirhams from all points of view. We could have new information about the provenance of the metal and the ore source, the production technology, the geographical distribution of dirhams mints, and the difference between the original and the imitation dirhams.

The research depends on the practical by studying and describing each coin: the mint of the struck, the name of the Emir and the Abbasid Caliph, the date, weight, and diameter; then the description of inscriptions and content.

Results: The research aims to highlight the importance of Islamic silver coins in Hungary during the ninth-tenth centuries. Sheds light on the Commercial Relations between The Islamic World, Vikings, and Eastern Europe during the ninth-tenth centuries. Finally, The hoard's dirhams will be presented with 3D measurements via using a VHX digital microscope in one modern catalog.

Keywords: Eastern Europe. Magyar. Volga Bulgar. Viking. Trade. Hungary.

Hydrogeological Environment and Bath Culture in Roman Pannonia

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Much of Roman Pannonia is covered by karst mountains. Below the mountains, between the Danube and Lake Balaton, there is a huge, contiguous groundwater system. The main component of the Transdanubian Mountains is limestone. It is covered with a thin loess cover. The falling precipitate quickly seeps into the deeper layers. Water stays below the surface for up to 2-3,000 years. During its journey, it filters and cleanses until it emerges in the form of crystal clear karst water in spectacular and abundant springs.

This interdisciplinary research is the first to project a map of the spas of Roman Pannonia on a map of karst springs.

The well-documented Roman bath culture of Aquincum and Brigetio was based on the springs of the Transdanubian Mountains. Both cities were connected to the surrounding karst springs by aqueducts. In the case of Aquincum, we know the exact location of the sources, in Brigetio it is only certain that the water was transported from 14 km from Tata on above-ground and underground pipelines.

There are two dozen springs in the region with the same capacity as those that fed the baths of Aquincum and Brigetio. We have no reason to assume that these sources were not known in Roman times. More than half of the resources were used, smaller and larger baths were built, and dams were erected to regulate the water. In addition to the large urban public baths, the military baths of the canabae, many villas have also been equipped with smaller private baths. These were supplied with spring water or wells drilled to access groundwater.

Healing flourished in the area of the springs, and the remains of the cult of Aescylapius and Hygieneia were excavated in many places.

Keywords: Hydrogeology, Karstwater, Bathing, Roman Pannonia

Ottoman Tobacco Pipes in al-Marqab Castle

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This presents a study of a typology of an unpublished collection of clay tobacco pipes that were discovered in al-Marqab Castle during systematic archaeological excavations performed in 2011, dating from the 17th until the 19th century, based on their comparison with related pipes found at other sites as in northern Palestine, Greece, and Turkey, this enabled us to demonstrate that the site was continuously populated during the 17th–19th centuries. This study also provides a historical overview of al-Marqab Castle in the Ottoman period as well as a brief of the history of Ottoman pipes, their development, and characteristics in different eras.

The Syro-Hungarian Archaeological Mission (SHAM) carried out excavations in the northern part of the inner suburbia of Qal'at al-Marqab. Where it found an Ottoman complex of buildings, built in medieval origins, and a Late Ottoman house with a garden and several rooms. The systematic archaeological researches at the al-Marqab castle have also led to the discovery of a large collection of ottoman pottery, glass fragments, iron fragments, coins, and animal bones. Among these archaeological materials discovered were complete or fragmentarily preserved smoking pipes.

Keywords: Ottoman, pipe, bowl pipe, al-Marqab.

Results of the research project focusing on the geospatial analysis and modelling of the settlement structure of Paks (Tolna county, Hungary) from Antiquity to the 20th century

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Results of the research project focusing on the geospatial analysis and modelling of the settlement structure of Paks (Tolna county, Hungary) from Antiquity to the 20th century

The project aims to utilize geospatial tools to present manmade changes at Paks and its close environment based on archaeological, archival, topographic evidence and sources. The present article outlines preliminary results of the project concerning the Roman age.

Lussonium, situated at Paks-Dunakömlőd is one of the best researched Roman forts in Hungary. Excavations on the area began in 1969 and apart from a few breaks are still ongoing. The settlement encircling the fort, the vicus was thought to be much smaller, but proved to have encompassed the hillocks surrounding the fort. The cemetery of the settlement and the fort has long eluded researchers. In 2008, following a report from local citizens, several graves were identified on the hill located NW of the Roman fort. 118 graves were excavated so far, yet stray finds documented both south of and north of the site, indicate, that parts of the cemetery may yet be discovered. Almost all of the graves pertain to the Late Imperial era, alongside a few Late Bronze age and Early Iron age urn burials and an unrelated Neolithic dwelling. Burial rites vary greatly: approximately 80% were basic pit graves, but the rest were sepulchres of various types, reflecting the richness of Roman funerary customs.

Goals and results: The first phase of the research focused on reconstructing the Roman settlement on the level of archaeological features, by synthesising different archaeological and historical data and structuring it into a database, which enables purposeful queries of relevant attributes, such as periods, grave types, burial rites, building function, circumstances of excavation.

Conclusion: The geospatial database facilitates creating thematic and overview maps, presenting the structure and history of the Roman settlement. The QField Android app developed within the framework of the project aids future academic research and fieldwork.

Keywords: roman archeology, GIS, roman settlements, limes

Peace following conflict? - Acts of might in the medieval Banat

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The twenty-six years preceding the battle of Mohács (1526) are called the era of the Jagiellonians. During the reign of the last two kings (Vladislav II [1490–1516] and Louis II [1516–1526]) of the medieval Kingdom of Hungary, many acts of might existed in the area of the Banat; these are known from the diplomas of the collegiate chapter of St Martin in Arad. Through these documents we can identify several conflicts between the local nobles, who frequently chose the philosophy of power to make their own justice. Almost 60 charters were published by the chapter about these violations of law and the peace. My presentation aims to systematically explore the nature, patterns and possible outcomes of these violations of the law. Through the various cases, we can gain insight into the life of people at the very end of the Middle Ages, as well as the affairs of local nobles, and discover the major concerns of those affected. I hope the results will be useful for future researchers and become a valuable piece of a larger puzzle.

Keywords: Arad, Banat, medieval Kingdom of Hungary, Vladislav II, Louis II

The Sanamein Hoard of the Hawran region of Syria

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This paper will introduce us to the Sanamein hoard, one of the most important coins hoards discoveries in the twenty-one century. It was discovered in Sanamein city, which is located in the Hawran region of southern Syria. This treasure was not found by an archaeological mission or legal excavations, but by chance, infrastructure work to repair an underground pumping line brought this treasure again to life. The hoard is mainly a big Jar which contains a huge mass of oxidized green coins, these coins were stuck together due to a high level of oxidization, forming a 7.5 kg mass, consisting of about a thousand pieces.

It is essential to mention that in the Middle East in general and especially in Syria, there are not many researchers in the numismatic field; in fact, there are not more than ten persons. And most of them are specialists in Islamic coins, it can be noticed that the classical ages haven't that much weight in the Syrian numismatics society. Furthermore, if the person searched for coin studies and his aim was the classical ages, he might find Seleucid, Roman, and early Islamic, but not Byzantine. Hopefully, this study will be the foundation stone of the Byzantine bronze and copper coins in Southern Syria.

Methodologically, the finest two hundred pieces have been chosen to be restored by the author, then one hundred thirty-nine of the two hundred were chosen to do the research. In the beginning, the analytical approach was adopted, which led to finding out that the hoard contained Byzantine copper coins that were marked on the obverse by the letters M, K and I. Secondly, reliance on comparative studies by viewing most of the Byzantine coins collection and catalogues in order to determine the date of using and minting these coins, then dating the entire hoard.

As a result, we conclude that the Sanamein Hoard dated from the late fifth century to the middle of the seventh century, 491-641 A.D. Anastasius I to Heraclius I. Since the Arab Muslims used the Byzantine follis, as a conclusion, there were no Arab-Byzantine coins, which we can recognise from the Arabic inscriptions on both sides of the coins. We also conclude that the hoard is completely Byzantine. Nonetheless, two invasions happened during Heraclius's reign, first from the Sassanid Empire and second from the Arab Muslims. Yet the Hoard is fully Byzantine, and the city was under Byzantine rule again.

Keywords: Byzantine, Coins, Copper, Hawran, Hoard.

Cesare Borgia's supposed papal sword

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The custom of gifting a blessed sword and hat on the third mass of Christmas has its roots in the 14th century. These artifacts can be studied as diplomatic gifts as well as magnificent works of art from the papal goldsmiths' workshop. As of today we know of 29 remaining swords in different museums and collections of the world. Usually the gift consists of a gilded sword, a belt with a golden buckle and a hat adorned with pearls. The visual concept and the symbolism of these artifacts represent protection and a down pouring heavenly power. The main topic of this presentation is a supposed specimen from the remaining blessed swords a Cesare Borgia's cinquedeas that is attributed to the master Ercole dei Fideli.

During his papacy the Borgia pope Alexander VI favored his family members and promoted them in any way he could. His son Cesare reached the rank of cardinal but later he gave up the position for a political marriage and become famous of his military achievements. He received numerous gifts from his father therefore it would be logical to assume that he received the blessed sword and hat. At some point even the literature of the topic started to refer to this particular cinquedeas in the collection of the Fondazione Caetani as Cesare Borgia's papal sword. However, it would be frivolous to state this clearly without subjecting the sword to a more thorough examination. To further develop the topic I used the parts of the papal accounting that refers to the ordering of blessed swords published by Eugèn Müntz and the works of Johannes Burchard as sources, and from the information contained in these treatises I try to identify the moment of the consecration of the sword if it really happened.

In this presentation I will examine the iconography and symbolism of the sword compared to the uniform characteristics of extant blessed sword and hat. With the help of the sources I will determine whether this sword was ever blessed on the third mass of Christmas during the papacy of Alexander VI making it an exemplar of the remaining blessed swords or if it should be excluded from the group.

Keywords: Blessed sword and hat, cinquedeas, papal gift

Medieval Burials in Al-Marqab Castle

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This research will deal with the funerary archaeology of the medieval burials in al-Marqab castle under anthropological aspects, by relying on the physical remains excavated by the Syro-Hungarian Archaeological Mission in the burial areas of the outer suburb of al-Marqab citadel between 2010 and 2011. Since the outer suburb cemetery has not been studied previously, this primary research will provide the first results and the burial analysis.

Al-Marqab castle is situated on the top of a volcanic plateau about 360 m above sea level, it is located 5 km east of Baniyas city overlooking the Mediterranean coast, and it belongs administratively to Tartus Governorate in Syria. The castle was established in 1062 by the local tribes. It was a very important center in the area militarily, administratively, economically, and religiously. During the 12th and 13th centuries, the castle was enlarged when it became one of Europe's most powerful medieval organizations, and the most important castle of the Order of St John.

Basically, the burial areas in al-Marqab castle were two:

1. The burial inside the castle.
2. The burial in the outer suburb of the castle.

The burial inside the castle: The archaeological excavations in 2011, by SHAM, have revealed an almost intact medieval burial at the southern end of the vaulting hall which borders the citadel's eastward central courtyard. However, the position in which the body of the male was buried was typical of the Latin cultures of the Crusader countries.

The burial in the outer suburb of the castle: The excavation by SHAM began in 2010 and found the physical remnants of a suburb outside the fortress on the mountaintop. During the excavations in 2010 and 2011, substantial remains of a town, about 10 hectares of which could be dated from the 13th century, were discovered. However, the most important structures which were uncovered by the survey were the remains of a chapel, and three burial areas A, B, and C.

Burial area A has hardly given a complete grave with lots of bone fragments, while burial area B has contained 11 graves, and burial area C consisted also of 11 graves.

To conclude, one of the most important results that came out after the analysis of 22 graves, is the existence of common characteristics with the burials in the regions of the Middle East, which proved that these graves belong to the Christian Crusaders.

Keywords: Funerary archaeology, Medieval history.

Plague epidemics at the frontier of the Modern Age: the 1771 epidemic wave according to the writings of Canestrini and Samoilovich

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Central and Eastern Europe, through trade, military and diplomatic relations with the Ottomans, was a frequent victim of recurring plague epidemics, which have decimated the population of a region since the Middle Ages. In 1769, there were many indications that the plague, which had been recurring for centuries, was again threatening Hungary's borders. As a result, the epidemiological regulations of previous centuries were reintroduced at county and national level, including the closing of trade and epidemiological borders, passages on improving public hygiene and the obligation for the epidemiological commissioners to keep records. In a similar scenario, preventive and direct action was taken in the other site of the comparative study, the Russian territories under Catherine II. Of course, the decrees issued by the executive were of no avail without effective medical assistance.

The aim of the presentation is to show, using the examples of two medical treatises, namely Anton Canestrini's *Dissertatio historica de peste* and Daniil Samoilovich's *Abhandlung über die Pest*, what medical background was available in Hungary, in the Zemplén county and in the East, during the Moscow plague of 1771, and what preventive and defensive measures were taken by the doctors of the time during the epidemic. By comparing the texts, we can gain insights into the works on which the doctors based their own medicine, the tools they used and how society reacted to their work.

Keywords: early modern age, history of medicine, medicine, plague

British secret service activities of Arminius Vámbéry during the Great Eastern Crisis, 1876-1878

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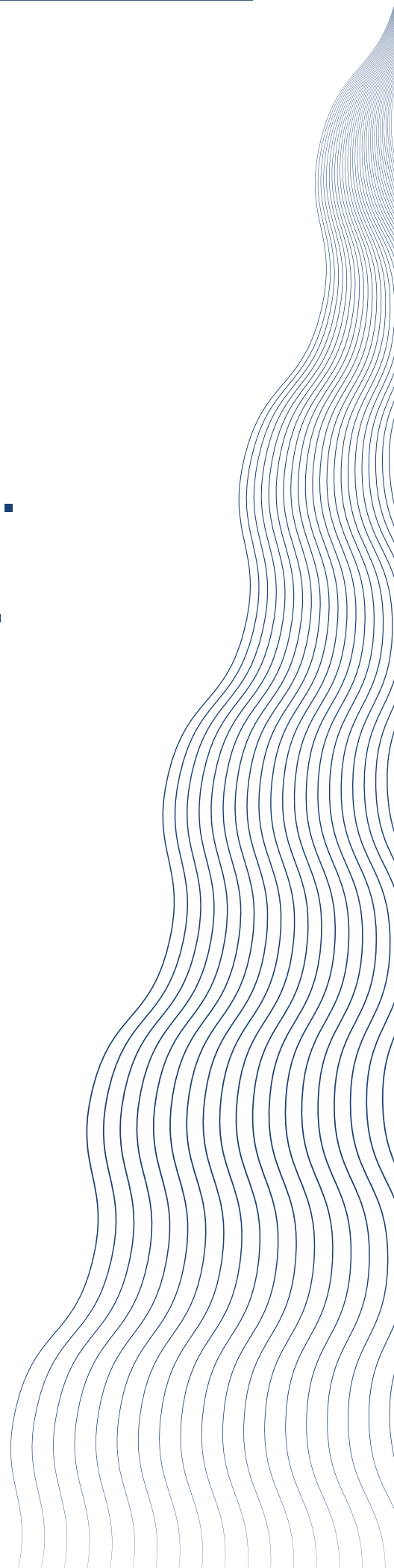
The Great Eastern Crisis (1875–1878), had a major impact on the balance of power at the end of the 19th century. The crisis was finally resolved by the international community at the Berlin Congress in the summer of 1878, leading to the occupation of Bosnia, the British occupation of Cyprus, and a year later the Dual Alliance, which defined German and Austro-Hungarian relations. The negotiations consisted of minor concessions and also rapprochement ensued between some of the Great Powers. Such was the Austro-Hungarian and British rapprochement, which led to mutual assistance at the Congress and even contained the possibility of anti-Russian cooperation. The background of cooperation between the powers was supported by a number of diplomats and political agents. Among the known agents were the Austrian deputy Count Montgelas, and on behalf of the British services Edmund Monson. However, since 2005, the famous Turkologist and traveler, Arminius Vámbéry (1832–1913) had been confirmed as a person in service of the Britain.

Vámbéry first met members of the British diplomatic corps in Constantinople on a research trip in 1864. Shortly after his travel reports to newspapers were received with great enthusiasm by the British public. Personally, he sought to turn the temporary interest against the Russian Empire's expansion into Asia. Vámbéry's contacts were primarily in the British Foreign Office, as his letters and reports were written to Sir Philip H. W. Currie, Secretary to the British Foreign Secretary and later Prime Minister, Lord Salisbury, who also later served as Secretary of State and Ambassador. His status as an official British diplomat at the court of Sultan Abdul Hamid II began in 1889. The later date is crucial as the literature, largely the body of work of various scholars date his role as a British agent and the production of his secret letters to the aforementioned date. However, the idea that Vámbéry was a political agent before 1889 is confirmed by one of the first works on Vámbéry's activities, written by Lory Alder and Richard Dalby, which mentions letters sent by Ármin Vámbéry to Lord Beaconsfield (1874-1881!), who was then Prime Minister of Great Britain (1874-1880). The research is therefore aimed at uncovering his political activities in the years 1876–1878, and contributing to the otherwise vast historical literature on his life.

Keywords: Austria-Hungary, Britain, Secret services, International Relations, Ottoman Empire, agents, spies, politics, Turkey

POSZTER SZEKCIÓ I.

POSTER SESSION I.



How can we help? - National and international initiatives to prevent violence against women

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It is well known that 35% of women suffer from physical or sexual abuse at least once in their lifetime, however, because of the lack of realization and denunciation, this value can reach 70%. In reality, there are even more forms of discrimination and violence against women that remain hidden in our society: according to my previous findings, the financial, occupational, institutional, psychological, verbal, physical, sexual and symbolic types of violence can all lead to serious societal problems directly or indirectly, such as feminicide, the act of homicide committed specifically against women. Given that incidents of gender-based violence have become commonplace in the media today, the question arises: what can we ourselves do to prevent and intervene, how can we help the victims?

In my recent research I have collected national and international initiatives that can help both victims and helpers, and that could be adapted within the context of each community.

Among the Hungarian initiatives, the Emotional Violence Test, commissioned by a Hungarian association called NANE (Nők a Nőkért Együtt az Erőszak Ellen Egyesület), has a very important role in raising awareness, as verbal violence is often considered a precursor to physical abuse. The association called PATENT operates a legal aid service, while the Hungarian Interchurch (Magyar Ökumenikus Segélyszervezet) draws attention to the phenomenon through video and poster campaigns. The foundation called 'Nem tehetsz róla, tehetsz ellene' is doing an outstanding work in the field of providing information and protecting the victims, while the Kék Vonal operates an anonymous helpline. As a Spanish public initiative, the 'We are with you' project is an important milestone in mobilising the power of the community to help the victims. At international level, one of the most widespread initiatives is the 'Signal for Help' hand signal launched by the Women's Funding Network, which provides a useful support and method to victims who find it difficult to seek help because of the constant control of their abusers.

By collecting national and international initiatives to combat inequalities between men and women, my research can contribute to raising awareness and sensitising bystanders for prevention and intervention.

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Keywords: prevention of violence against women, types of violence, national and international initiatives, sensitisation

Shigella sonnei species in the serve of antibiotic research

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Shigella spp. are Gram-negative, rod-shaped intracellular pathogenic bacteria belonging to the family Enterobacteriaceae. As Gram-negative bacteria, Shigella sonnei's major outer membrane components are lipopolysaccharides. Our project demonstrates the effect of a lipopolysaccharide biosynthetic deficiency on bacterial fitness. The role of lipopolysaccharides goes beyond structural function, thermosensitivity, biofilm-forming ability, antibiotic susceptibility are all related to the proper biosynthesis of these molecules.

Here, we examined the effects of lipopolysaccharide biosynthetic mutations in the clinically important species, Shigella sonnei. Two previously described mutant strains, Shigella sonnei 4303 and Shigella sonnei 4351 were used to understand how defects in this critical part of Gram-negative bacterial cell wall affect virulence and antibiotic susceptibility. The performed comparative genomic analysis complemented with structural data helped us to understand the effect of a specific mutation on virulence and how the analysis of lipopolysaccharide deficiencies serves antibiotic research.

As the biogenesis of lipopolysaccharides is conserved, the study of this pathway and its effect on bacterial metabolism is fundamental for the development of new therapeutic strategies in the fight against pathogenic bacteria.

Keywords: Shigella sonnei, shigellosis, lipopolysaccharide

Urban Design of Jingkai New Town in Jingzhou Economic and Technological Development Zone

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Jingzhou is a cultural city with a long history in China, it is located in the south of Hubei province. Based on the development needs of the key functional areas of Jingzhou Economic Development Zone, the urban design project of Jing Kai New Town proposes suggestions for solving problems for the project site, such as disordered distribution of spatial functions, fragmented regional traffic connections, fragmented green patches, and poor ecological environment. At the same time, it also provides practical experience and development paths for China's current urban renewal.

Keywords: Chinese city, Urban design, Jing Kai new town, Industrial community, TOD

Investigation of the properties of polyketone under the influence of glass fiber reinforcement

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Polyketone (POK), a new environment-friendly engineering plastic produced from carbon monoxide (CO), can be used for various applications including package, fibers and technical items in many areas. The introduction of other polymer materials, reinforcing fibers, micro-and/or nanofillers into POK matrix is powerful for obtaining POK based new materials with specific characteristics and satisfactory improvements of properties. The aliphatic polyketone is a very promising engineering plastic with very good chemical resistance and excellent wear frictions properties. In addition, it has exceptionally good mechanical properties and super low permeability also. The aliphatic polyketones are produced from olefin monomers and carbon monoxide. In order to reduce costs, polyketone has been mixed with glass fiber, calcium carbonate and silicon dioxide in recent years, which modify and also improve flexibility, stiffness and thermal stability. Glass fibers reinforced polymer composites are prime examples of strong and lightweight materials. In this study, I would like to present, based on my test results, the effect of changing the amount of filler on its properties. The basic matrix material is the POK and I analyzed 15% and 30% glass fiber filler with non-reinforced polyketon. We analyzed the samples by Shore D harness tester and impact strength test. The highest hardness increase was given by the sample containing is a 30 percent glass-fiber-reinforced (M33AG6A) (84). Similar conclusions can be drawn when examining the tensile strength because the higher tensile strength at yield was measured with the 30% reinforced samples (145 MPa). The non-reinforced polyketone tensile strength at yield is only 60 (MPa). The elongation at break decreased as the amount of filler material increased and the result of the 30% glass fiber in this case was: 3.7%. The value of the reference samples what was non-reinforced is 22%. The charpy impact test results shows that the higher value was measured with the non-reinforced polyketon (16 KJ/m²). Water absorption at saturation was reduced with the reinforced fillers. The higher water absorption at saturation was 2% with the reference samples.

Keywords: polyketone, glass fiber, high-performance polymer, reinforcement

The archaeological survey project in Tartus Governorate

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In the interest of the antiquities of Syria from extinction and vandalism, the General Directorate of Antiquities and Museums in Syria has launched the archaeological survey project in Tartus Governorate, which the Antiquities Department of Tartus started in 2012, and the work on this project is still ongoing.

The archaeological survey targeted all archaeological landmarks, tools, and signs, that can be seen by surface investigation of the land, completed archaeological sites & monuments or their ruins, such as castles, towers, bridges, or service and residential facilities, such as houses, temples, cemeteries, caves, baths, mills, Grapes & olive presses, and the fountains.

The field outputs are survey reports that will mainly include geographical and architectural descriptions of the surveyed feature, photographs, and measurements of coordinates.

These outputs constitute a database for the surveyed archaeological sites, which will be processed using Geographic Information Systems (GIS), to produce an interactive electronic map of archaeological sites in the Tartus Governorate. Making it easier for users to access site information from the GIS interface directly.

Tartus Governorate consists of six administrative districts: Safita, Tartus, al-Shaykh Badr, Drykish, Qadmus, and Baniyas. The archaeological survey project in Tartus governorate has suffered from frequent interruptions due to the difficult current conditions in Syria, but the survey team was able to finish its work in al-Qadmus, Shaykh Badr districts, and part of the Drykish, Banyas, Safita, and Tartus districts.

This project has great importance in preserving and protecting the region's heritage and evoking it, this importance increases in light of the ongoing war in Syria, which poses a serious threat to the entire Syrian heritage.

Keywords: Archaeological Survey, Tartus governorate, al-Qadmus District, al-Shaykh Badr District, Drykish District, Banyas District, Safita District, Tartus District, Geographic Information Systems, Database, Electronic Archaeological Map

Tourism related problems and possibilities of historical tourism development in Budapest. How some aspects can interfere on the historical landscape?

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This article has as its priority to analyze the current situation of tourism in Budapest taking into account the positive and negative aspects for the city and for the residents. Find out the consequences that this tourist movement can have on the quality of life of its inhabitants, such as the price of housing, products, transportation, etc.

This analysis will be based on reading articles, news and experience as a resident of the capital. Also make a brief analysis of new mechanisms that attract tourists, such as Airbnb, Lime (scooters), etc.

Budapest has attracted many tourists for years due to its architectural and historical beauty, being considered one of the most beautiful capitals in the world. Even during the communist regime the city was regarded as a „refuge” for the communist bloc, where people from neighboring countries could come and enjoy a certain „freedom”. And for the capitalist bloc it was a way of experiencing life in a place of different political regime. But with the fall of the communist bloc in the late 1980s and early 1990s, there was also a fall in the tourist movement in the Hungarian capital. This fall is due to several factors, such as the opening of new cities that were once part of the communist bloc to the world and the freedom of the population to come and go.

From the 2000s, Budapest has been rediscovered for tourism, attracting more tourists each year to the Hungarian capital. This growing tourist movement is due to its architectural and historical beauty as well as its well-known nightlife, with its famous ruins bars. With this increase in tourism there have also been changes in real estate, security, cleaning, transportation, etc. These changes were both possessive and negative in many ways.

According to an article of BBC about the Airbnb, in Barcelona this kind of temporary housing is dealing with some issues as tenant expulsions, harassment and daily disruptions. Besides that the Barcelona council says that Airbnb „creates speculation and illicit economies and its activities leave nothing positive for local neighbors, causing nuisance and complaints” (GUTTENTAG, 2018). But it is not only bad experience with the Airbnb or similar platforms. This can be also positive when you think about the local economy and a cultural exchange that can bring sometimes to the neighborhood. As well bring more life to those distant areas or with a “bad” reputation, when they try to attract more tourists.

Keywords: tourism, problems, possibilities, historical landscape

Examining the individual differences in the development of early social cognition

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Social cognition refers to cognitive processes and skills individuals use to understand, interpret in and respond to social situations. The development of social cognition emerges in infancy and continues to develop through early childhood to adulthood.

In our current study we aim to examine early social cognition through parent reports from infancy to the preschool years. We also aim to test the reliability and validity of the Hungarian versions of two parent report questionnaires targeting early social cognition and children's social understanding. Along with that we aim to test the individual differences in the development of early social cognition and its relationship with executive function and theory of mind.

We applied parent report questionnaires during the adaptation process. The Early Social Cognition Inventory (ESCI) and the Children's Social Understanding Scale (CSUS) targeted the development of early social cognition. We used the Ages and Stages Questionnaire as a general developmental screening tool. Parents also filled in questionnaires about their children's behaviour and executive function (SDQ, CBCL, CHEXI, CSBQ).

Previous research show that both the ESCI and the CSUS are valid and reliable measures of individual differences in social cognition. Our study aims to create an equally reliable and valid Hungarian version of the parent report questionnaires and show the first results of our ongoing study with a large sample of parents with children between 4 and 39 months of age.

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Keywords: social cognition, theory of mind, executive function, individual differences

Legal Language and Plain Language Movement

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The legal practice, judicial rulings and jurisprudence for many years have produced many new terms. These terms seemed vague and difficult to understand for ordinary people. There are even those who claim that it is a new language. That language is usually called legalese.

Based on the importance of clarity in legal texts and terminology and its impact on the rights of ordinary individuals and their dealings, some have believed the need to work on simplifying the legal language so that it is easier for the public to understand. Some thinkers and philosophers, such as Jeremy Bentham and Thomas Jefferson, have criticized the ambiguity and complexity of legal terminology.

Practically, signs of a trend toward a simple legal language began in the mid-twentieth century, especially in the United Kingdom and the United States of America, in addition to other countries like Australia and New Zealand.

Keywords: plain language, legalese, legal language

Identification and diagnosis of soil-borne pests with particular focus in grapevine nematodes

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Kosovo has a good potential for agricultural production in terms of the range of vegetables and fruits, particularly the production of grapes. The grapevine production area in Kosovo is organized in a total surface of 3,437 ha, whereas 911 ha are table grapes and 2526 ha are cultivated with grapevine (MAFRD, 2021). The grapevine production area is located mainly in the Municipality of Rahovec but also in neighboring municipalities such as Suhareka and Malisheva. The favorable weather conditions of our country allow the development of main grapevine diseases and pests. Due to the fact that previous studies carried out by Dida, L. (2012) and Bunjaku, A. (2021), are confirmed the presence of some viruses and in particular GFLV virus which is transmitted by *Xiphinema index*, the focus of our study was to investigate particularly grapevine nematodes. Until now, there are very few data regarding the soil-borne pests, however, there are no data regarding the presence of nematodes in the grapevine area in Kosovo. Therefore, the aim of our study was to investigate the main soil borne pests with particular attention to the vector of GFLV which is the genus of nematode *Xiphinema* spp. The first step of our study was to investigate the vineyards which are affected by GFLV, this was carried out by meeting stakeholders and farmers of the area as well as marking the main infected zones. Ten field visits were carried out during the vegetation period of the year 2022. September is the appropriate time for sampling in our condition. During September 2022, sixty soil samples were taken and transferred to the laboratory for extraction and further analysis. All soil samples were prepared and only twenty samples were subjected to laboratory identification of soil-borne pests. From analyzed samples were identified main soil-born pests such us: *Zabrus tenebrioides*, *Phyllophaga* spp., *Agriotes lineatus*, and *Lumbricus* spp. Furthermore, objective of our study was to focus attention to the extraction of nematodes and morphological identification phase of identification. From twenty extracted samples, through microscopic identification only three of them were positive in the genus *Xiphinema* spp. Single nematodes from the positive samples were collected and prepared for the DNA extraction. Further confirmation through molecular features are currently undergoing in order to confirm the identity of the findings. As an output of our study will be the first monitoring of soil-borne pests with particular attention to *Xiphinema* spp. in order to appropriately investigate and evaluate the impact of the nematodes on the damage of the grapevine yield production in Kosovo and possibly develop and implement a managing protocol.

Keywords: grapevine, soil borne pests, nematodes, GFLV, Xiphinema spp.

Background indicators of cultural learning in community culture

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The phenomena of cultural learning (Juhász & Szabó 2016; cf. Kozma 2016) is understood in a wide spectrum: This is an autonom learning form carrying defining functions for the enrichment of cultural capital, that belongs in the community learning subsystem of education (Forray & Juhász 2009). Mixing quantitative and qualitative methods, our ongoing study includes all the non-formal and informal learning events, that are realised using the toolset of community cultural institutions.

The aim of our study is to map the types and unique patterns of cultural learning in Hungarian community learning institutions. We examine the “peak institutions” of community culture in terms of cultural and social capital investment, activity and institutional system, human resources, field specific professional uniqueness, programs aimed at disadvantaged people, and formal and informal connection networks.

In our combined study method, following a first statistical (OSZK 2020, KSH 2019) second analysis (N=197), then partial sampling (N=6), questionnaire and document examination was carried out. The study will be completed with structured leader interviews during the spring of 2023.

Our most important result so far is, that based on the cultural learning index, only agora/cultural centre institutions are listed in the partial sampling, which support nearly all community cultural base services (20/2018. EMMI r.): most typical themes of their cultural learning events are culture and arts, and free time activities and hobbies. The employers are generally satisfied (Likert-scale) with the number and outputs of employees. In the activity patters aimed at localities, the disadvantage compensation and opportunity creation functions are significantly identifiable in the whole sample.

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Keywords: community culture, community learning, OSAP, regionality, education

Software analysis of posture of youth footballers

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Introduction: Biomechanically correct posture is an important prerequisite for delivering maximum performance and minimal joint strain during sport. This dynamic state of equilibrium is maintained by continuous activity of muscles and thus the tension of joint capsule and ligament system is physiological. In case of young athletes we have to reckon changes in body size and body proportions during adolescence growth which result in changes of the biomechanical conditions of movements and thus in a temporary decline in motor skills. The significance of this period from a long-term career's point of view of an athlete is given by the fact that we can significantly influence the basis of the subsequent stabilization period and individual movement pattern formation as well as the optimal structure of the competitor's body.

Material and methods: We conducted a survey of 100 (n=100) youth footballers (12-15 years old), in which after recording habitual posture of 4 sides, they were analyzed by Posture Screen software. Screening of movement patterns of the players was measured by the FMS method.

Result: Examined by age group (U12-U15), it can be seen that results of the U14 age group were the worst in posture parameters (PIFS 3,75 cm± 1,43, PIFT 8,12±5,67, PIBS 5,84 cm±1,99, BIPT 23,09±7,8, PIRS 8,1 cm±2,64, PIRT 16,41±6,48, PILS 11,49 cm± 2,76, PILT 25,4±6,2) and we found significant differences compared other age groups (U12 p=0,03, U13=0,045, U15=0,024) Also in case of total FMS score U14 age group showed the lowest value (U12 FMS 15,31 U13 FMS 15,21, U14 FMS 14,21, U15 FMS 15,83) but these differences were not significant.

Conclusion: During the period of peak high velocity of growth, there is a decline in motor skills due to changing posture, which is also supported by our study. Inadequate biomechanical conditions associated with careless posture can play a key role in athlete performance due to consequent functional muscle dysfunction. The essence of posture analysis is to filter out the attack points of subsequent prevention training, thus individualizing the development program, which aims to ensure undisturbed preparation and competition while restoring biomechanically correct posture and besides creating optimal conditions for physical development.

Keywords: body posture, youth, football

The effect of adding paprika essential oil to liquid whole egg product properties

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Eggs are the cheapest and most commonly used complete animal protein one whole egg can provide an average of 75 kcal. Due to the fact that eggs are highly consumed globally, manufacturers invented new more stable products than shell eggs such as liquid egg products. Three fractures of egg product are usually produced, liquid whole eggs, liquid egg yolk and liquid egg white. All egg products are pasteurized before packaging which makes them microbiologically safe to handle [1]. Adding flavors to liquid egg products can increase its customer acceptance and nutritional value as well as it may enhance its shelf-life as well. Paprika (*Capsicum annuum*) is a widely consumed spice, their essential seed oil is very rich with unsaturated fatty acids especially linoleic acid which allows it to play an important role in human health [2]. Due to its antioxidant characteristics paprika is commonly used in meat products to enhance both color and flavor [3].

Aim: The aim of this study is to investigate the effect of paprika oil on liquid whole egg products.

Method: 1, 2, 3% V/V of paprika was added to pasteurized liquid whole egg then pH, color and viscosity were measured to evaluate the effect. The pH was measured at 4 °C using a portable digital pH meter (206-pH2, Testo SE & Co. KGaA, Titisee-Neustadt, Germany). Tristimulus color measurements were performed with a Konica-Minolta CR-410 chroma-meter (Konica Minolta Sensing Inc., Osaka, Japan) at 4 °C. Viscosity measurement was performed by MCR 92 rheometer (Anton Paar, Les Ulis, France) at 15 °C. A sensorial evaluation was made to determine the change in taste.

Results: A significant effect on all parameters were measured, adding paprika oil effected color, pH, and viscosity of liquid whole eggs.

Conclusion: Adding paprika oil can change the chemical and physical parameters of liquid whole egg as well as enhance its taste.

Acknowledgement: Our research was carried out with the support of the RD 2020-1.1.2-PIACI-KFI_2020-00027 project, and doctoral school of Food Sciences at the Hungarian University of Agriculture and Life Sciences, which we would like to thank.

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Keywords: paprika oil, liquid whole eggs, egg products

Monitoring of chicken breast temperature in a laboratory environment – a pilot study

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Introduction: The quality and safety of meat products are highly influenced by their storage conditions. Maintaining the cold chain in the entire process of meat processing and distribution is necessary because its interruption can lead to the multiplication of spoilage microorganisms.

Aim: The purpose of this study is to monitor the temperature changes of chicken breasts in a laboratory environment in order to understand how the product behaves at different stages of the logistics system. In this investigation, the temperature was observed under various modelled after-store conditions such as courier and customer delivery and product storage at home.

Method: The samples were formed to 15×30 mm, around 4.3 g cylinders formed from chicken breast. 5 different circumstances were modelled. In the first case, the delivery happened by a courier in a 360×220×220×35 mm polystyrene box that contained a 250×140×120 mm cooling element. In the second, delivery was performed by a customer in a cooler bag (200×140×140 mm) that was pre-cooled by a 160×90×60 mm cooling element for 20 minutes. The third one was also delivered by a customer but without any special conditions. Finally, home storage was modelled in a refrigerator and at room temperature. The temperature was traced continuously by the E-Val Pro system + ValSuit 5.0 software equipment. In all cases, the measurement started from 4°C.

Results: The results show the importance of proper temperature control. While in the first model, the cooling element could have created an appropriate condition for the meat, the improper position caused freezing. The second condition was better than the third, but the pre-cooling was not sufficient to create the correct temperature. The fourth and fifth experiments showed that if the product is delivered at the right temperature, it should be refrigerated immediately in order to ensure food safety.

Conclusions: We can conclude that temperature management is highly essential in the logistics field. The results show differences between the individual conditions; however, further investigations are needed, in order to gain a deeper understanding of the product's behaviour at different stages of the logistics system.

Acknowledgement: The study is supported by the Doctoral School of Food Science (Hungarian University of Agriculture and Life Sciences) and by Dept. of Livestock and Food Preservation Technology (Institute of Food Science and Technology).

Keywords: temperature monitoring, chicken breast meat, delivery, storage

The psychosocial and organisational correlates of mobbing in times of pandemic

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Mobbing or workplace harassment is a situation in which an individual is subjected to continuous and prolonged insults and abuse at work. It usually starts with a conflict, which develops into a psycho-terror and the victims are subjected to regular attacks, but it has a number of negative consequences for both the individual and the organisation; it is also associated with stress, satisfaction, performance and turnover, and has a number of negative health effects.

In our research, we sought to answer the question of the relationship between mobbing and psychological well-being and different organizational outcomes, and to find out whether the role of the leader is really important in relation to mobbing.

The study included workers aged 18 and over who had been working for at least half a year, for at least 4 hours a day, for a total sample of 197. Participants were asked to complete a questionnaire pack containing several questionnaires related to organisational well-being and outcomes (e.g. Copenhagen questionnaire, WHO5 Well-being Questionnaire, Workplace Stress Questionnaire).

Our research confirmed the findings of previous studies; on the one hand, mobbing does play a role in various negative organizational outcomes. It also confirms the prominent role of the supervisor in these outcomes and highlights how the support (and lack of it) of the supervisor can contribute to the destructive effects of mobbing. Therefore, it is important to consider factors that may contribute to mobbing and exacerbate the situation when examining mobbing.

Keywords: mobbing, pandemic, organizations

Egészségmagatartás és egészség-érték kapcsolata

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Bevezetés: Egy társadalom egészségi állapota jelentőségteljes, így egy egészséges fiatalság a magyar társadalom számára egy kifizetődő befektetés [1]. Az egészségmagatartás az egészséggel kapcsolatos magatartásformák összességét jelenti, amely megnyilvánulhat aktív vagy passzív formában [2,3]. Az egészségmagatartás tudatosításával és kialakításával számos betegség megelőzhető, amelyet igazol, hogy az 1990-es évekhez képest a nem fertőző megbetegedések közül, a szív- és érrendszeri megbetegedés megduplázódott [3]. A lakosság egészségi állapotának negatív igazolt hatásai megmutatkoznak egyéni szinten, illetve hatást gyakorol az egészségügyi ellátórendszerre is.

Célkitűzés: Célunk, hogy igazoljuk az értékek szerepét az egészséges életmód kialakításában, ezzel az egészségnevelés jelentőségét az oktatási intézményekben.

Módszer: Az adatgyűjtési módszerünk a kikérdezés, kérdőívünk közel 50 – több főbb csoportba sorolható – kérdést tartalmazott, a kérdéscsoportok az alábbiak. Az adatgyűjtéséhez validált attitűd kérdőívet (MAS, ATDP-O), az eszköz- és célértéket mérő Hofmeister-Tóth – Neulinger értékskálát alkalmaztunk, saját kérdésekkel kibővítve, amelyet 111 fő töltött ki összesen. Az adatok feldolgozása SPSS 24.0 statisztikai programmal készült.

Eredmények: Az egészség az eszközértéknél az első (4,83), a célértékeknél a második helyen szerepel (4,73) a boldogságot követően (4,77). Összefügg az ADTP-O eredményei és az egészség, mint célérték (p=0,024).

Következtetés: Fontosnak tartjuk a preventív szemlélet kialakítását, továbbá az inkluzív oktatási közeg megteremtését.

Támogatás: Az Innovációs és Technológiai Minisztérium ÚNKP-22-3 kódszámú Új Nemzeti Kiválóság Programjának a Nemzeti Kutatási, Fejlesztési és Innovációs alapról finanszírozott szakmai támogatásával készült.

Irodalomjegyzék:

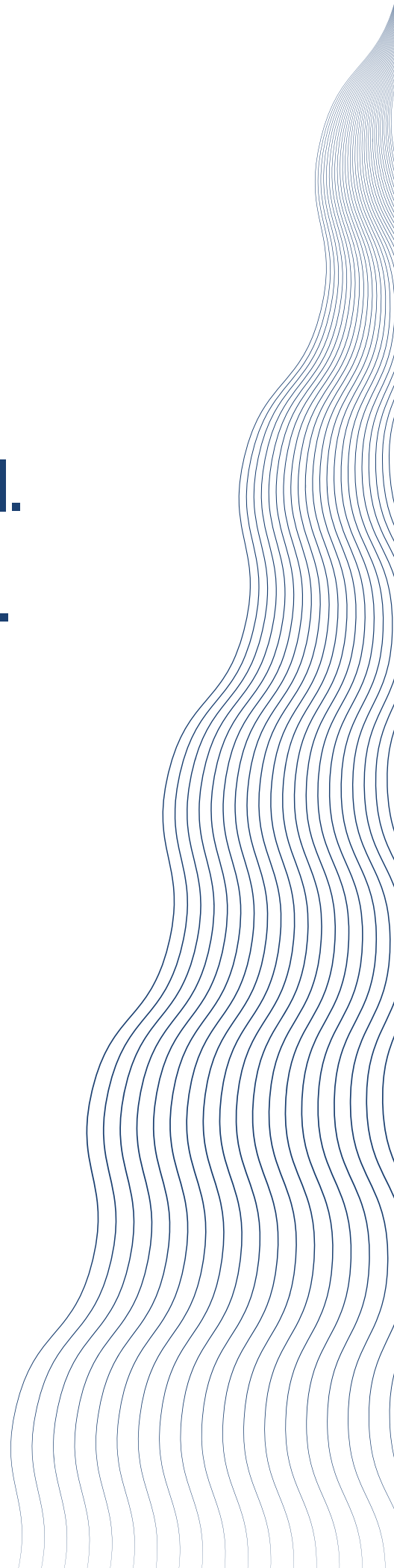
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Kulcsszavak: egészség-érték, attitűd, egészségmagatartás, egyetemi hallgatók

POSZTER SZEKCIÓ II.
POSTER SESSION II.



Investigation of the effects of metallic nanoparticles on the interaction between fibroblasts and tumor cells

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Introduction: Fibroblasts are the most abundant cells in the tumor stroma, and by the secretion of various soluble factors facilitate the proliferation, invasion and the metastatic progression of tumors. It has been verified that disrupting the interaction between tumor cells and tumor-associated fibroblasts (CAFs) could be the base of an efficient anti-cancer strategy to prevent invasion and metastasis. Our main goal was to investigate whether the presence of gold (AuNP) or silver (AgNP) nanoparticles affects the fibroblast-tumor cell interactions in vitro.

Methods: Using 3T3 fibroblast and 4T1 breast cancer murine cell lines, we addressed this issue in a highly simplified system in which the tumor cells were treated with AuNP or AgNP and were kept in co-culture with fibroblasts. The migratory capacity of 3T3 co-cultured with 4T1 cells was examined with Cytosmart live cell imaging system, and to detect the level of matrix metalloproteinases (MMPs) secreted by 3T3, gelatin zymography was performed. The proliferation of 4T1 cells in co-culture was measured by CCK8 assay.

Results: The migration of 3T3 cells co-cultured with 4T1 cells was drastically elevated compared to the control, but AuNP and AgNP treatments reduced this increased tendency significantly. The gelatin zymography results show that following interaction with the 4T1 cells, higher secretion of MMPs by 3T3 cells was found compared to the untreated samples. However, AuNP or AgNP treatments did not modify the elevated MMP secretion significantly. Proliferation of 4T1 cells co-cultured with fibroblasts increased compared to the control, but upon AuNP and AgNP treatments a significant decrease is observed.

Conclusions: The increased migratory capacity and MMP secretion are usual characteristics of CAFs, and although nanoparticle treatments did not affect the MMP secretion, they had a suppressing effect on fibroblast migration. The higher proliferation activity of tumor cells indicate the involvement of CAFs. In order to support the hypothetic presence of CAFs, certain CAF-markers should be investigated as well. The results suggest that the co-culture system is adequate for investigating the communication between non-cancerous and tumor cells. In addition, further experiments are extended to murine primary fibroblasts to get a more comprehensive picture about the involved mechanisms.

Acknowledgement: „Nemzet Fiatal Tehetségeiért Ösztöndíj” (NTP-NFTÖ-22-B-0100) (NTP-NFTÖ-21-B-0157)

Keywords: *metallic nanoparticles, tumor-associated fibroblast, co-culture*

Investigating the relationship between cutting temperature and cutting speed for C45 steel

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Introduction: All material separation processes by cutting are created by overcoming the tensile strength of the preform (pre-product). The parameters affecting the cutting tool and machining machine directly involved in the process include, among others, cutting speed, feed and depth of cut. During material removal, almost all work is converted into heat. Most of the work is dissipated in the tool and the workpiece material [1]. The greater the forces on the tool, the more work is required, which influences the temperature. In addition to the temperature, the force also significantly affects the cutting force and tool wear. The purpose of the measurement is to make sure that the temperature measuring system is working properly, so that I can adapt a well-functioning system for further experiments.

Method: The focus of the experiment is on C45 steel, which, due to its properties, has significant applicability in mechanical engineering. An Opti Turn L44 CNC lathe and a Testo 882 thermal camera were used during the experiment. During the measurements, I always set the depth of cut to $a_p=1$ mm. I treated the feed and the cutting speed as variables and examined the changes in the temperature according to them.

Results: During the evaluation of the measurements, the results show that, in addition to the feed, the cutting speed significantly affects the heat development processes. In the case of smaller feed values, a strong increase in temperature can be observed during the heat development processes at the start of the cutting, which later seems to stabilize. As the feed rate increases, the intense heat production process itself jumps to the cutting temperature, and then remains at a nearly constant value independent of the cutting speed. The findings of my research are quite similar to the results reported in the article by Farag Abdallah et al., despite the fact that they used different measuring conditions [2].

Conclusion: The change in the cutting speed greatly affects the cutting temperature, which has a significant impact on the service life of the cutting tool as well as on the surface quality created by cutting.

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Keywords: cutting temperature, turning, technological parameters

Roots of the Love Attitudes in adulthood: the influence of parents and cartoons

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Introduction: How we experience love is different in every person, but there are similarities nonetheless. One of the measures trying to capture the similarities within the individual differences is the “colours of love” theory (Lee, 1973), which differentiates 6 types of love, divided into three main and three secondary types. These Love Attitudes can be influenced by several things, for example social learning. In childhood, there are two primary sources, where we can see romantic relationships: our parents and media, such as movies or cartoons.

Aim: In this study we examined the relationship between one’s Love Attitude and the perceived Attitude of their parents, in comparison to the favorite childhood cartoons and the main characters’ Love Attitude.

Method: In order to determine which cartoons to use, we conducted a preliminary survey (N=36) and chose the 12 most popular cartoon movies (e.g. Shrek, or Disney’s Hercules). In this survey, we also asked participants to rate the main character and their love interest on the Hungarian short form of the Love Attitude Scale (LAS-HSF). In the main study, young adult participants (N=269; age M=23.3; SD=2.6) had to fill out the LAS-HSF for themselves and their parents’ perceived style, as well as rating the cartoons (if they used to watch them as children and how much they liked them). Both surveys were conducted online.

Results: We found a connection between the participants’ and their parents’ Love Attitude in the Ludus (playful, uncommitted love), Pragma (“logical” love), Mania (possessive love), and Agape (selfless love) styles. The Pragma style in their favorite cartoons also showed a positive connection to the participants’ Attitude, and their Eros (romantic love) score was closer to the liked cartoons’ main characters’ Love Attitude, than to the parents’.

Conclusion: The parents’ perceived Love Attitude is similar to one’s in early adulthood. However, there are behaviors that are rarely shown in front of the child (such as public displays of affection), so the often-seen main characters and their on-screen romantic relationships might be a role model in forming one’s own relationships.

Keywords: love, colours of love, cartoons

Preliminary experiments of soil hydrophilic/hydrophobic character testing with Krüss DSA 100 drop shape analyser

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Introduction: Soils' hydrophysical properties (water retention and conductivity) can be strongly influenced by the wettability (hydrophobic/hydrophilic character) of soils. The number of research focusing on soils' hydrophobic character is increased in recent decades, however we do not have an accurate picture of its spread, either globally or regionally. The hydrophobic properties also change in time; regions with warmer climates and sandy soils may be particularly affected, which will be an ever more noticeable phenomenon as climate change progresses.

Material and methods: During our preliminary experiments, we used Krüss DSA 100 drop shape analyzer to test the wettability of 10 different Hungarian soil and sediment samples. Based on the liquid droplet dropped onto the surface of the solid phase, the contact angle and water drop penetration time can be measured, which are excellent indicators of the wettability of the solid phase. We studied two types of sample preparation methods, „pastilles method” (PM) and „adhesive stripe method” (ASM). Furthermore, we examined control and surfactant-treated soil samples, where the CPC cationic surfactant was adsorbed on the surface of the soil samples in a monomolecular layer coating.

Results: The PM and ASM hydrophobicity sequence were different for the samples. It is also difficult to compare the results obtained with the two preparation methods because the contact angles measured with the PM depend to a large extent on the pressure forces applied during the pastille process. It is encouraging for the application of the instrument in soil research that the increase in hydrophobicity of the samples was well detected in surfactant-treated soils.

Conclusion: The Krüss DSA 100 provides a simple way to characterise the wetting properties of the solid phase and it is therefore important to find the soil science adaptability of the measurement methodology. The results of our preliminary experiments are promising and it is expected that the indicators of soil wetting properties will be useful for soil physics, soil chemistry and soil biology studies.

Acknowledgement: This research is supported by the Hungarian National Research, Development and Innovation Office Foundation (Grant No. OTKA K134563).

Keywords: hydrophobic, soil wetting character; Krüss DSA 100, drop shape analyzer; contact angle

Effect of calcium spraying on fruit quality parameters and weight loss during storage of 4 Apple varieties

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The genotype of the cultivars is mostly responsible for determining the quality and storability of apples. Other factors could affect how peculiarly is expressed. Therefore Calcium (Ca) is perhaps the most important mineral determining the quality of fruit, particularly in apples and pears because these fruits are generally stored for long periods of time (Faust, 1989). Early research has demonstrated that fruits with low Ca concentrations are more susceptible to physiological disorders such as bitter pit and cork spot. The best way to increase the calcium content of fruit is to directly apply calcium during vegetation period.

Study includes the result of four apple cultivars which were sprayed with Ca during the vegetation season. This study was carried out from June 2021 to April 2022 in the Experimental Farm of the Faculty of Horticultural Science of the MATE, in Soroksár, Hungary.

The aim of this study was to examine the efficiency of calcium sprayed (All-season, Early, Mid and Late season spray) on different apple cultivars in order to achieve high quality and long storability. The importance of achieving adequate Ca supply for enhancing the quality of apple fruits has stimulated researchers of fruit growing regions of the world to increase fruit Ca concentration and thereby improve fruit quality and storability. The main purpose of this study was to examine using foliar pre-harvest application of calcium on physical parameters, apple yield, fruit firmness, total soluble solids, acidity, and weight loss on apple varieties ‘Golden Reinders’, ‘Idared’, ‘Watson Jonathan’ and ‘Jonica’.

Our results confirmed that calcium treatments have positive effect on the fruit quality and the storage life. We found that in the case of some apple cultivars - for example the observed Watson Jonathan and Golden Reinders – the preharvest calcium treatment (foliar application) is more effective than the noncalcium sprayings apple cultivars. It seems the applied calcium was built in the cell walls and decreased the water loss during the long-term cold storage of apple fruits.

Acknowledgment: I acknowledge the Tempus Public Foundation for providing scholarship for doctoral training in Hungarian University of Agriculture and Life Sciences in order to carry out this study.

Keywords: calcium, calcium content, cold storage, fruit firmness, soluble solids concentration, spray program, weight loss

Biodegradation modelling of PLA by microbial consortium

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Introduction: Polylactic acid (PLA) is a common representative of bio-based polymers, because it is a recyclable and biodegradable polyester produced by lactic fermentation process from natural resources. PLA has a high similarity to conventional synthetic polymers, and it is mostly resistant to microbial attacks under ambient conditions. Therefore, the post-use degradation in nature is a slow process. Aim of the research was to map the applied microorganism strain's PLA depolymerase enzyme profile for PLA biodegradation.

Methods: The strain selection was performed from mesophilic microorganisms (*Bacillus*, *Aspergillus*, *Yarrowia*) by using screening method. The lactic acid utilization was carried out on 0,1% lactic acid agar plate. For the proteolytic enzyme activity testing the used media was a casein agar plate (Radha et al., 2012) and for the estherase enzyme activity it was the Tween 80 agar plate (Rhiani et al., 2018). For the biodegradation modelling PLA biocomposite was examined (100RPM, 30°C) in submerged environment, inoculation rates of the pre-cultured, selected microorganism strains were 10 (w/w) %. For depolymerase enzyme activity the protease was determined with casein as a substrate (Ire et al., 2011) and the cutinase activity was determined with p-nitrophenol-butyrate as a substrate (Yang et al., 2013).

Results: During the experiment the microbial consortium synthesized protease enzyme activity was higher on a gelatin supplemented medium while the cutinase enzyme activity was higher on a glucose supplemented medium. At the end of the experiment the enlarged amount of cutinase enzyme meant effective PLA mass degradation.

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Keywords: pla, biodegradation, enzyme, consortium

Enhancing empathic communication in simulated clinical practice

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Introduction: This study is a presentation regarding a research project which seeks to identify the educational activities of the Department of Languages for Biomedical Purposes and Communication at the Medical School of the University of Pécs. The use of empathic communication techniques with patients and relatives has particular importance during clinical work, as it significantly contributes to the effectiveness of therapy. In our study, we demonstrate the course called ‘Empathetic and assertive communication in clinical practice.

Aim: Our research aimed to identify factors promoting the enhancement and expression of empathy in medical students during doctor and patient communication. This study investigates the language of clinical empathy: how medical students implement language used to build empathetic communication.

Methods: Participants are all undergraduate 3rd, 4th, or 5th-year medical students participating in the course ‘Empathetic and assertive communication in clinical practice’ involving simulation practice at the Medical School of the University of Pécs. During the simulated scenario, one medical student portrays the role of a doctor, and a simulated patient assumes the patient role. All other students take part as observers. During the observed interaction, the communication process is focused on the development of empathy. We used the empathy scale, the empathy map, and the teacher’s observer scale to measure the educational process results.

Results: The empathy map helped the medical students better understand the patient during the dialogues. In the patient questionnaire, the aspects of calmness, providing understandable information, respect, active listening, encouragement, and joint decision-making were evaluated with the highest scores in the doctor’s evaluation. Non-verbal signs such as nodding and eye contact achieved the highest score.

Summary: During the persuasion, the doctor and the patient could reach a joint decision. We found a difference in the two types of situations, depending on whether the task was to convince the patient about the treatment or to break bad news. The role of empathic communication was to achieve successful cooperation during persuasion, while during breaking bad news, it was support, understanding, and assistance.

Keywords: empathic communication, simulation, empathy map, doctor-patient communication

Cyclodextrin Derivatives as Promising Inhibitors of TRPA1 and TRPV1 Activation

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Transient Receptor Potential Ankyrin 1 (TRPA1) and Vanilloid 1 (TRPV1) are nociceptors associated with pain integration and development of neurogenic inflammation. These non-selective cation channels are located in cholesterol-rich membrane domains (lipid rafts) of primary sensory neurons and peripheral nerve terminals. Their activation is aided by the surrounding lipid environment. Targeting hydrophobic interactions of the protein-lipid interface seems promising to be a novel mechanism of action in analgesia. Cyclodextrins (CDs) are able to form inclusion complexes with cholesterol, depleting it from lipid rafts. Our research group found that lipid raft disruption by Methyl- β -cyclodextrin (MCD) inhibits TRP ion channel function and has analgesic effect in animal models.

5 different CD derivatives (Randomly methylated β -cyclodextrin: RAMEB, (2-Hydroxypropyl)- γ -cyclodextrin: HPGCD, (2-Hydroxypropyl)- β -cyclodextrin: HPBCD, Sulfobutylated β -cyclodextrin sodium salt: SBEC and (2-Hydroxy-3-N,N,N-trimethylamino)propyl- β cyclodextrin: QABCD; CycloLab Ltd.) were tested in respect of their cytotoxicity (1, 3, 10, 50, 100 mM; 24 h) on chinese hamster ovary (CHO) cells with CellTiter-Glo® Luminescent Cell Viability Assay. To reveal the effect of 24-hour CD treatment on mitochondrial functioning of CHO cells MitoTracker™ Red CMXRos fluorescent dye was used in laser scanning confocal microscopic experiments. Radioactive ⁴⁵Ca-uptake measurements were performed on TRPA1 and TRPV1 receptor-expressing CHO cells to detect alterations in receptor activation after CD treatment.

In CellTiter-Glo® Luminescent Cell Viability Assay the methylated derivative RAMEB showed significant cytotoxic effect in 3.5 mM concentration, but none of the non-methylated derivatives decreased cell viability in 10 mM concentration. HPBCD treatment (1 mM and 10 mM) and QABCD treatment (10 mM) resulted in significantly increased fluorescence intensities of CHO cells' mitochondria labeled with MitoTracker™ Red CMXRos.

All of the investigated CDs were able to inhibit the ⁴⁵Ca-uptake in TRPA1 and TRPV1 receptor-expressing CHO cells in a concentration dependent manner.

In conclusion non-methylated derivatives have much lower cytotoxicity compared to RAMEB, HPBCD (1 and 10 mM) and QABCD (10 mM) are significantly affecting mitochondrial functioning and all investigated CD derivatives are able to inhibit TRPA1 and TRPV1 channel activation, presumably via the disruption of lipid rafts.

Keywords: Transient Receptor Potential, Lipid raft, Cyclodextrin, Pain, Inflammation

Investigation of the kynurenine pathway in the cuprizone mouse model

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Introduction: Multiple sclerosis (MS) is an immune-mediated, chronic inflammatory and demyelinating disease of the central nervous system. It is characterized by demyelination, lesions with loss of axons and degeneration of neurons [1,2]. Cuprizone (CPZ) toxin can be used to investigate the mechanisms of demyelination (DEM) and remyelination (REM) of the MS in lack of peripheral immune response. Some metabolites of the kynurenine pathway (KP) show alterations in different neurological disorders, including MS [3]. The aim of this study was to investigate the alterations caused by the CPZ feeding in the levels of selected metabolites of the KP.

Material and methods: The animals (n = 36) were fed with 0.2% cuprizone mixed into a grounded standard rodent chow for 5 weeks. Every treatment week, urine samples were collected from the animals (CPZ n = 6, CO n = 6). At the end of the five week treatment period, the animals (CPZ n = 18, CO n = 18) were sacrificed. The animals were investigated by their body weight, and with ultrahigh-performance liquid chromatography with tandem mass spectrometry (UHPLC–MS/MS) technique.

Results: In the first few days of CPZ intoxication, we experienced a significant decrease in body weight in the CPZ treated group (DEM) compared to the control (CO), (p < 0.01 DEM vs. CO). Ultrahigh-performance liquid chromatography with tandem mass spectrometry (UHPLC–MS/MS) measurements showed a significantly decrease in kynurenic acid levels in urine samples from the first week of CPZ treatment, which remained until the end of the intoxication (p ≤ 0.001 DEM vs. CO).

Conclusion: Our results suggest, that cuprizone intoxication influences the level of kynurenic acid in periphery.

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Keywords: *multiple sclerosis, cuprizone, demyelination, kynurenine pathway, kynurenic acid*

Fingerprinting *Monilinia fructigena* infection in sour cherries with near infrared spectroscopy

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Sour cherries are one of the most nutritionally and culinary recognisable stone fruits. Due to their relatively light tissue structure, the fruits are highly sensitive to the fluctuation of environmental conditions and contain all the essential components that promote undesirable microbial spoilage processes. Significant losses occurring during cultivation, harvesting and storage of sour cherries is mainly linked to brown rot caused by *Monilinia* species. In the present study, near infrared (NIR) spectroscopy-based models were developed to investigate the early detectability of brown rot.

Sour cherries of different varieties (Érdi bőtermő, Újfehértói) were contaminated with *M. fructigena* conidial suspensions of different concentrations (~105, 104, 103, 102 conidia/mL), through injured or intact fruit surface. Including the sound control fruits, half of the 90 samples per variety were stored at 5 °C and the other half at 24 °C. The spectral data were collected with a NIR-S-G1 hand-held reflectance spectrometer in the wavelength range of 900-1700 nm at three measurement points along the horizontal axis of the fruits, with three successive scanning. The data were evaluated in the wavelength range of 950-1650 nm after spectral pre-treatments. Principal component analysis-based linear discriminant analysis (PCA-LDA) models were developed to determine the initial conidial contamination and early detectability of brown rot.

The spread of brown rot in the sour cherries was variety-dependent. Only the injured fruits inoculated with conidial suspension of ~105 or ~104 conidia/mL and stored at 24 °C showed signs of the infection. The PCA-LDA models correctly distinguished fruits contaminated to varying degrees with fungal conidia on the first storage day. In addition to this, the method was able to select fruits that did not yet show signs of infection with good accuracy. The results suggest the ease of application and practical relevance of NIR spectroscopy-based fingerprinting approach used, fruits in the early stages of infection can be detected and sorted, supporting rapid and effective intervention.

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Keywords: sour cherry, brown rot, near infrared spectroscopy, chemometrics

A Possible Synergy of the Community of Inquiry Framework and the Bohmian Dialogue – A New Learning Experience for Hybrid Communities

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The widespread diffusion of information technology has transformed and mediated the places of learning and teaching, the communities involved and their communication (Szécsi, 2017). By concentrating attention on the info-communication space supported and maintained via electronic means at the aggregate level over the last three years; we have also witnessed significant shifts in emphasis regarding such fundamental factors as the perception of presence and their qualities in the educational process (Tószegi-Radnai 2021).

In this context, the development and application of digital and mental tools for hybrid spaces and communities (Szécsi, 2008) pose a challenge and call for the reconsideration of concepts such as virtuality, information (Szécsi, 2003) and presence (Garrison, 2017).

The Community of Inquiry framework developed by Randy D. Garrison functions not only as an educational but also as a research tool, approaching the learning process based on different aspects of presence (cognitive, social and teaching) (Garrison, 2017). Its positive impact on attitudes, motivation, and learner interest, which is accompanied by an increase in learner responsibility, have been reported by international and national research (Csapó 2015, Wu-Hsieh-Yang 2017, Castellanos-Reyes 2020). While dialogue, the modality as presented and described by David Bohm and his interlocutors, offers the possibility of monitoring and learning about the process of cognition, exploring assumptions, intentions and driving forces both in the community and individually (Bohm 1991, Ute 2013, Lane 2020). The potentiality of a new learning experience for hybrid communities resulting from the synergy of the framework and the aforementioned dialogue is raised.

Keywords: Community of Inquiry, Dialogue, hybrid community, inclusive communication

A review of Technology Transfer Models

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Introduction: Technology transfer has been a hot topic in many academic fields for decades. Technology transfer from academic and research institutions has transformed the business environment and the economy of strategic variables for countries or regions or institutions to address challenges globally [1]. Research and education have been the two main tasks of higher education institutions. At the same time, higher education has been given a third mission, which is to transfer the academic value of higher education institutions into the value of positive contributions to society [2].

Aim: The effective and efficient transfer of technology has therefore become an urgent research priority. The first step in addressing this issue is the need to understand the evolution and development of previous technology transfer models, to identify changes in technology transfer model research, to examine the future direction of technology transfer model research and to give some recommendations.

Method: The research method for this paper is mainly a literature analysis.

Results and Conclusions: The paper finds that technology transfer has become more advanced and complex over time. New model concerns have emerged over time, and these are also listed in this paper to discover how they have changed. Secondly, R&D has become a clear manifestation of core competitiveness and hard power. Thirdly, the ecosystem of research institutions and industry chains needs to be further explored. Finally, the new role and function that technology transfer will have on the theme of sustainable development today needs to be further investigated.

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Keywords: Technology Transfer, Higher Educations, Models, Evolution and Development, Future Research Direction

Effects of lactic acid and ascorbic acid mixture on the game meat quality properties

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In this work the effect of lactic acid and ascorbic acid mixture was evaluated in wild boar meat and deer meat surface on meat quality parameters like pH, dry matter, and water activity water holding capacity.

The aim of this work was to define and compare basic techno-functional properties of beef and game species meat, and to investigate the ageing procedure in vacuum packaging.

A mixture of 2% lactic acid and 2% ascorbic acid was sprayed on game meat samples. After vacuum packaging immediately the samples were stored at 4 ± 1 °C for 21 days. Quality parameters were measured on days: 1, 7, 14, and 21.

On the 21st day of storage, there was a decline in pH values compared to the first day of storage. The decrease in pH value throughout the storage is presumably an after effect of the creation of organic acids from carbohydrates, produced by lactic acid bacteria. The results indicate there were no significant effects on water activity and water holding capacity.

Therefore, lactic acid and ascorbic acid mixture treatment may be an alternative to extend meat shelf life.

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Keywords: lactic acid, ascorbic acid, game meat, meat quality

Examination of rehabilitation utilisation among patients undergoing total hip arthroplasty in public and private healthcare

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Objectives: The aim of our study is to compare the rehabilitation utilisation outcomes of patients who underwent total hip arthroplasty in public and private healthcare in Hungary.

Methods: Patients were selected from the Department of Orthopedics, Clinical Centre of the University of Pécs and at the Da Vinci Private Clinic in Pécs, using a simple convenience sampling technique. In the 6th week postoperatively, they completed a questionnaire about utilisation of rehabilitation (frequency, type of rehabilitation). We also examined the use of walking aids and complications in the postoperative period.

Results: The research involved 164 people, 75 patients in the state and 89 in the private healthcare. There was a significant difference in the proportion of patients who received rehabilitation, with 90.67% of public sector patients and 59.55% of private sector patients ($p < 0.001$). Among them, 53.33% of public patients visited a public rehabilitation institution ($p < 0.001$) or 25.33% used public home care, while private patients mainly used public (20.22%) and private (17.98%) home care. There was also a significant difference in the timing of utilisation, with 46.67% of public sector patients starting treatment immediately compared to 19.10% of private patients ($p < 0.001$). In the 6th week after surgery, public patients mainly walked with one (36.0%) ($p = 0.003$) or two elbow crutches (45.33%) ($p < 0.001$), and private patients either with one elbow crutch (15.73%) or without a walking aid (71.91%) ($p < 0.001$). We found no significant difference between the groups in the incidence of complications, the rate of post-operative visits to the doctor and the rate of new hospital admissions.

Conclusions: We found significant differences in rehabilitation utilisation between public and private health care patients who underwent total hip arthroplasty. In summary, the rehabilitation utilisation was higher for public patients, and most of them started treatment immediately. The high proportion of private patients had left the walking aid by the 6th week after surgery. There was no difference in complications, visits to the doctor and hospital admissions.

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Keywords: public and private health care, hip prosthesis, rehabilitation, complication