

EDUDOC SERVICES: CURRENT CONTENT



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August - 2022



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Introduction

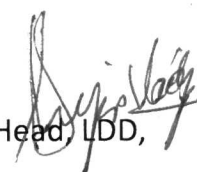
“Current Contents” prepared by Library and Documentation Division aims to identify the articles published in the learned journals received by the library in the month of August, 2022.

Current Contents are arranged alphabetically under the broad subject headings. It gives the details about the name of the Journal, volume, issue month and year of publication. It will be our endeavour to bring out this as a reference tool, which will make our readers aware about the current contents available in different learned journals of their subject of interest.

Current Contents will be useful to our faculty members in electing/recommending relevant articles for their research.

Keeping in mind the integration of ICT and Digitisation, attempt has been made to provide the Web-link of the current issues, which will facilitate the readers to access the articles, except the ‘*’ marked journal titles

We eagerly await to received your views and comments.


Head, LDD,

NCERT, New Delhi

Sr. No.	Name of Journals	Vol.	Issue	Month	Year	Pages
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1.	Economic and Political weekly	57	28 29 30 31 32 33	9 Jul 16 Jul 23 Jul 30 Jul 6 Aug 13 Aug	2022	21-26
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3.	Bhartiya Adhunik Shiksha	41	3 4	Jan Apr	2021	
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6.	Educational Action Research: an International Journal	30	3	Jul	2022	27
7.	Harvard Educational Review	92	2	Apr-Jun	2022	39-40
8.	International Journal of Educational Research	111 112 113		Jan Mar May	2022	44-49
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9.	Computers and Education	176 179 180 181 182 183 184 185 186 187		Jan Apr Apr May Jun Jul Jul Aug Sep Oct	2022	8-19
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16.	Loksanskritam(Sanskrit)	38	2	Aug	2022	80-81
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17.	American Journal of Physics	90	5 7	May Jul	2022	1-4
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	Psychology					
19.	Contemporary Educational Psychology	68		Jan	2022	20
20.	Journal of Applied Developmental Psychology	78 79 80		Jan-Feb Mar-Apr May-Jun	2022	51-54
21.	Journal of Counseling & Development	100	3	Jul	2022	55-56
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Cover figure: In a simple and inexpensive demonstration of factors affecting lift and drag, airfoils created with a 3-D printer are attached to a force sensor and held in an airstream. Lift (top) and drag (bottom) forces are measured as a function of velocity for four profiles, showing the effect of the wing camber and the angle of attack.

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Cover figure: Nitrogen vacancy centers in diamond are accessible systems for undergraduates to learn about quantum technologies using optically detected magnetic resonance. The splitting of electron spin transitions due to the nuclear spin states is observed via photoluminescence measurements. For more information see "Observing hyperfine interactions of NV⁻ centers in diamond in an advanced quantum teaching lab" by Yang, et al. (p. 550).

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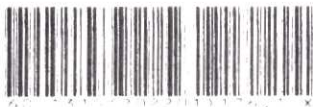
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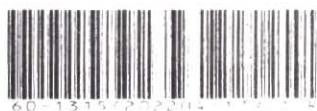
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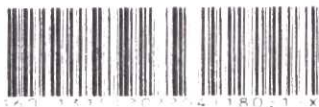
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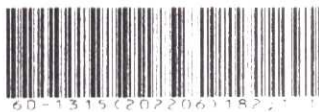


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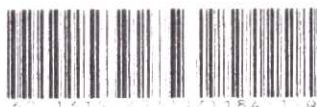
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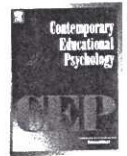


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Politics of Knowledge

10 The parallel coexistence of central and provincial spheres in education has a visible functional role but also a less visible political and an even less visible sociocultural role. Several decisions announced since the beginning of 2022 enable us to observe these disparate and simultaneous roles.
— *Krishna Kumar*

Decolonising Decentralised Governance

12 This article describes three cases from Maharashtra where bureaucratic overreach has impeded emerging forest management by forest dwellers holding community forest resource rights. It reflects on the need for changing the prevalent colonial mindset in the bureaucracy to facilitate genuine decentralised democratic governance. — *Anuja Anil Date, Sharachchandra Lele*

Dynamics of Being Rajbanshi

16 The transition from tribe to caste has remained a contested phenomenon in India. This complex transition is addressed in this article in the context of the Rajbanshi identity, highlighting the various intricacies involved. The frame of retribalisation questions the simplistic tribe-to-caste narrative and reiterates the Rajbanshi's consistent efforts to embrace generic roots left in the past to bargain with the wider society. — *Gautam Chandra Roy*

Delimitation of Jammu and Kashmir

32 The union government went on with the process of delimitation in Jammu and Kashmir with an unflinching focus, disregarding the immense opposition to this exercise by most political parties on the ground. It is essential to enumerate the basic aspects of this delimitation and analyse how these can have profound political consequences in the union territory of J&K.
— *Muhammad Mutahhar Amin*

Income Inequity in the Utilisation of Inpatient Services

39 The data on equalised household income and inpatient service utilisation from the National Sample Survey Office are employed to analyse the extent of inequity in the utilisation of inpatient services before (2004) and after (2014) the implementation of the PFHI in 2008. This is done by estimating concentration indices and the horizontal inequity indices.
— *Vanita Singh, Amit Garg*

Political Reservations and Service Delivery in Village Government

48 The impact of reservations for the Scheduled Castes as village heads is examined on school and governance outcomes. In general, sc reservation is not associated with improved outcomes. The findings can be attributed to negative perceptions, discrimination, and domination faced by the scs.
— *Priyanka Pandey, Sandeep Pandey*

Every Family Its Own Historian?

57 Family historians select the most desirable facts, figures, myths, and legends to present a strange blend of facts and fancies. This paper explores how the Syrian Christians mobilise, conceive, and position their histories within the social matrix of Kerala and their ideological uses for identity politics.
— *Nidhin Donald*

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Not or Not to Loot?

The experiment of public-private partnerships in Turkey in the last 20 years showcases George Akerloff and Paul Romer's theory of looting.

—T Sabri Öncü

-economic Status and Macroeconomic Beliefs

Using a household-level panel data set on Indian households, it is shown that households' macroeconomic beliefs—their expectations regarding country-level macroeconomic developments—depend on their socio-economic status.

—Sargam Gupta, Vidya Kamate

Analysis of Rural Shocks in India during the Pandemic

Analysing the third round of World Bank survey data collected during September 2020, the employment shocks in rural India are analysed based on the gender, age, caste, and income quartiles of individuals.

—Nabamita Dutta, Saibal Kar

Ensuring Protection of Women in NRI Marriages

This study examines the legal remedial measures for women trapped in non-resident Indian marriages under private and public international law as well as the Indian legal and institutional framework.

—Bharat H Desai, Mayank Sharma, Santosh Upadhyay & Moumita Mandal

Addressing Urban Vulnerability

To address hunger, the Government of Delhi had issued temporary ration coupons in the first COVID-19 lockdown of 2020. This article uses a data set of nearly 17 lakh households that applied for e-coupons to measure and spatialise food insecurity in the city.

—Gautam Bhan, Hridbijoy Chakraborty & Parushya

Formal Financial Outreach in Rural India

Using a survey data set, this paper challenges the conventional view by including that relatively resource-rich rural households from distant locations availed multiple loans from formal lenders rather than the households located closer to them as often believed.

—Debdatta Pal

Disparities in Social Development in Maharashtra

This paper follows the methodology adopted by the Council for Social Development to construct a six-dimensional social development index for an analysis of development in the districts of Maharashtra.

—Garima Malu

Occupation, Earning, and Gender

This study analyses the employment distribution of working-age women by occupations across their activities in usual principal status in the Periodic Labour Force Survey for 2017-18 by taking into account the household-specific factors and workers' personal characteristics by using a multinomial logit model.

—Panchanan Das, Madhurima Saha

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Deboljit Ranjan on how tennis has become a battleground of nationalism versus professionalism; Mohammad Kamran Ahsan on how Fahmida Buzdar dented the dominant narrative that portrays Muslim women as being without agency; Anshu Ghna Roy on how *Thinking of Home* depicts the intertwined lives of distress and respite; Last Lines (1300)

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Judicial Courage in Testing Times

An independent judiciary requires not only systems and norms designed to prevent interference but also individuals prepared to uphold such independence at great cost. — *Alok Prasanna Kumar*

Novel Health Approaches in the COVID-19 Pandemic

Novel public health experiments from Maharashtra demonstrate significant potentials to advance people-centred health system changes. — *Abhay Shukla*

Agnipath Scheme

Far from being driven by a vision for the reform of the armed forces, the Agnipath scheme is an outcome of compulsions born out of severe financial and strategic shortcomings. — *Ghazala Wahab*

Fixing Appropriate Reserve Prices for 5G Radio Spectrum

This article analyses the spectrum-winning bid prices in simultaneous multiple round ascending auction held across the world for 700 MHz. — *V Sridhar*

COVID-19 and Multiple Inequalities

In this article, the potential pathways to the resistance raised by the fisherfolk in Poonthura are explored, thereby placing their responses as historically and politically embedded ones. — *Sabu K Ulahannan, Prashanth Nuggehalli Srinivas, Sreenidhi Sreekumar, Johnson Jament & Malu Mohan*

Maria Aurora Couto (1937–2022): An Obituary

Maria Aurora Couto brought out the facets of her cosmopolitan outlook and her abiding faith in the synthetic traditions of Goan/Indian culture. — *Manish Thakur*

Labour Laws for Gig Workers

In an attempt to incorporate the doctrine of universalisation of social security, the gig workers are brought into the ambit of the labour laws for the first time with the provision of some welfare measures under the Code on Social Security, 2020. — *Deepika M G, Madhusoodhan M*

Electronic Agricultural Spot Markets

The electronic spot market has introduced technological innovations to agricultural commodity market trading through the electronic National Agriculture Market. To assess the role of the electronic spot market in price discovery, this paper explores the price efficiency test between select commodities' spot and futures markets. — *Kushankur Dey, Debasish Maitra*

Self-financialisation and the Shifts in Engineering Education

The self-financed quantitative expansion of engineering education in Kerala should not be seen as a logical expansion consistent with demand and supply, rather it should be primarily seen as qualitative, contributing to a change in the meaning of what engineering education is and has historically been. — *Manu V Mathew*

Social Networks and Job Search Flexibility of Migrant Workers

This paper examines the job-seeking behaviour, various traits of labour employability, and the nature of mobility to achieve employment aspirations of the North East migrant workers in Bengaluru. — *Reimeingam Marchang*

Better to Reflect Than Shoot the Messenger

There was a significant reduction in the overall estimated footfall for outpatient and inpatient care at the all-India level between 2014 and 2017–18. — *Muraleedharan V R, Girija Vaidyanathan, Sundararaman Thiagarajan, Umakant Dash, Rajesh M & Alok Ranjan*

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Ukraine War and the Perils of 'Self-determination'

The right of "self-determination of the people" is a double-edged sword.
— Atul Bhardwaj

The Payments' Problem of Electricity Distribution Licensees

The payment delays by the distribution licensees to power generators can be best addressed through smart prepaid meter installations, a part of the recently announced distribution sector scheme of the Ministry of Power.
— K L Kaistha

Xi Jinping Gifts 'Historical Nihilism' to China

Just as "national rejuvenation" betrays the revolutionary conceptions at the founding of the Communist Party of China, the whole official narrative during the nationwide celebration in China is premised more on hype than reality.
— Hemant Adlakha

The Socio-economic Status of the Baiga Tribe

The category of primitive tribal group was created to include those groups that were considered the poorest of the poor. This article investigates the different aspects of the socio-economic life of the Baiga tribe of central India.
— Devendra Prasad Pandey

Sources of India's Post-reform Economic Growth

This paper analyses the sources of India's economic growth in terms of industry origins, inputs, and productivity during 1994–2018, comparing the pre- and post-global financial crisis periods. Manufacturing was one of the main contributing sectors to aggregate the growth of the total factor productivity and the gross value added in the post-GFC period.
— K L Krishna, Bishwanath Goldar, Abdul A Erumban, Pitu Chandra Das & Suresh Chand Aggarwal

Trade Credit and Bank Credit

The study develops an empirical model to test the substitution of trade credit for bank credit using the annual financial data of 1,028 Indian manufacturing firms from 2011 to 2019. It further examines the impact of macroeconomic policy interventions on using these two financing sources.
— Ramesh Bhat, Samveg Patel

Performance of Women in Parliament

The performance of women legislators is analysed by looking at the nature of questions posed by them over a span of 20 years (1999–2019) in the lower house of the Indian Parliament. This paper is a quantitative analysis of women's political performance during the Question Hour session, which is considered as an important plenary space where legislators act on their own free from the party regulation. — Sadia Hussain

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Stavrosasi Maril and how food writing can function as an alternative mode of political speech. *Supriya Ranjan on The Worst Person in the World* (63). In the wake of the recent aptly existential crisis faced by the eminent journalist, *Sri Kanth Datta* on a critically thinking population as the most vulnerable. *Devendra Prasad Pandey* on digital misinformation; and *Last Lines* by *Ponnappa*

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Last Lines by Ponnappa

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Language as a Space for Scientific Enquiry

Languages that learners bring to school indicate their cognitive potential. Their languages can constitute a space for introducing them to the methods of scientific enquiry. — *Rama Kant Agnihotri*

Food Consumption Expenditures and COVID-19

The pandemic-induced lockdowns resulted in a sharp increase in the share of food in the total expenditure across rural and urban India for all income groups, castes, and religions. — *Nidhi Kaicker, Aashi Gupta & Raghav Gaiha*

National Achievement Survey 2021

The National Achievement Survey has unveiled the picture of the current school education system in India. — *Parul Gazta, Jagdish Jadhav*

Sri Lankan Crisis

Sri Lanka's problems have their origins in economic policy that focused on providing fiscal sops and a family-run political establishment that enabled the government to ignore sound advice. — *Biju Paul Abraham, Partha Ray*

W(h)ither Karnataka?

Of late, Karnataka has been in the news for unhealthy reasons. Controversies relating to the wearing of hijab by students have left a scar on the social landscape. — *V K Natraj*

Left Victory in Colombia

The electoral victory of the left represents a great shift in the Colombian political landscape and the political common sense of the Colombian people. — *Tathagatan Ravindran*

Viewing Caste Inequality Upside Down

The justification for a slew of preferential policies aimed at Brahmins in three southern states of India is empirically examined in this article. These preferential policies retrench the existing caste inequalities instead of eliminating them. — *Ashwini Deshpande, Rajesh Ramachandran*

Repositioning of the Family Planning Programme in India

The findings from the National Family Health Survey-4 (2015-16) indicate a strong need to reposition the family planning programme to meet the unmet need of contraceptives by improving the quality of healthcare and promoting the spacing methods of contraception by minimising the 12-month contraceptive discontinuation rate in India. — *Shri Kant Singh, Gudakesh*

Socio-economic Inequality in Longevity in India

Two new indices—the index of representation in longevity and the index of socio-economic inequality in longevity—are presented for examining socio-economic inequality in longevity in India. The findings suggest that India suffers from substantial socio-economic inequality in longevity with the Scheduled Castes, Scheduled Tribes, and Muslims being the worst off. — *Laeek Ahmad Siddiqui, Ashish Singh*

Earning *Bhadramahila* and the 'Endangered Race'

This paper attempts to document the changing attitude of the sections of *bhadralok* in colonial Bengal towards middle-class women's paid work. From the 1920s onwards, a number of journal editors and contributors began to propagate ideas of middle-class women's widows' economic independence. — *Ishita Chakravarty*

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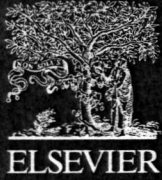
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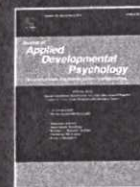


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October 2021

Volume 68
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<https://www.apa.org/pubs/journals/cou>

Articles

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- 501 **Development and Psychometric Evaluation of the Sexual Minority Women’s Sexual Objectification Experiences Scale**
Elliot A. Tebbe, Bonnie Moradi, Emily Wilson, Haley L. Bell, Kathleen Connelly, and Alex Lenzen
 This article describes the development of a measure of sexual objectification experiences that is grounded in sexual minority women’s experiences. This measure shows promising reliability and validity for use in future research and practice.
- 515 **Examining Minority Stress, Dyadic Coping, and Internalizing Symptoms Among Male Same-Sex Couples Using Actor–Partner Interdependence Models**
Elissa L. Sarno, Camille Bundy, Christina Dyar, and Michael E. Newcomb
 For same-sex couples, an individual’s experience of stress as a result of their marginalized status may impact not only their own mental health but also that of their partner. This study suggests that when male same-sex couples cope with that stress together, it can reduce this impact, but when engaged in very frequently, joint coping can exacerbate the effects of one partner’s stress on the other’s anxiety and depression.
- 526 **Cultural Context Matters: Testing the Minority Stress Model Among Chinese Sexual Minority Men**
Shufang Sun, William T. Hoyt, Nicholas Tarantino, John E. Pachankis, Laura Whiteley, Don Operario, and Larry K. Brown
 This study provides partial support for the application of minority stress theory among sexual minority men in China and suggests the relevance of a contextualized conceptualization of minority stress. When applied in China, the minority stress model ought to consider the collectivistic, relationship-oriented context shaping minority stress processes and psychological health of sexual minorities.
- 538 **Retiring or Rewiring? Test of a Social Cognitive Model of Retirement Planning**
Lee T. Penn and Robert W. Lent
 We adapted the social cognitive model of career self-management to the study of retirement planning in a sample of older workers. Findings of the study suggested that the model was useful in predicting retirement planning goals and anxiety as well as current level of certainty about retirement plans.
- 550 **Beyond Symptom Reduction: Development and Validation of the Complementary Measure of Psychotherapy Outcome (COMPO)**
Harold Chu, Eddie S. K. Chong, Dana Atzil Slomni, Zeynep Sidun, Nili Solomonov, Mary V. Minges, Nadia Kuprian, and Jacques P. Barber
 The goal of psychotherapy does not only include the reduction of psychological symptoms, yet most outcome measures focus on symptom change. A new measure is developed to assess nonsymptomatic changes that patients and therapists care about in therapies across theoretical orientations.

- 562 **The Role of Mental Health Counseling in College Students' Academic Success: An Interrupted Time Series Analysis**
D. Martin Kivlighan III, Barry A. Schreier, Chelsey Gates, Jung Eui Hong, Julie M. Corkery, Cari L. Anderson, and Paula M. Keeton
 College student success and retention remain a problem for institutions of higher education. Therefore, this study examined the role of university counseling centers in the academic success of college students. Findings suggested that individual counseling at a university counseling center had a positive effect on students' academic performance. Moreover, clinically distressed students who experienced a greater reduction in psychological distress during counseling experienced greater academic success over time.
- 571 **Intra-individual Association of PTSD Symptoms With Binge Drinking Among Trauma-Exposed Students**
Lance M. Rappaport, Shannon E. Cusack, Christina M. Sheerin, and Ananda B. Amstadter
 This study demonstrates that, among undergraduate students who report a prior potentially traumatic experience, elevated daily posttraumatic stress symptom severity is associated with increased likelihood of binge drinking. The association with increased likelihood of binge drinking is specific to posttraumatic stress symptoms and not evident for concurrent negative affect, depressive or anxiety symptoms.
- 582 **Effects of Patient–Therapist Interpersonal Complementarity on Alliance and Outcome in Cognitive–Behavioral Therapies for Depression: Moving Toward Interpersonal Responsiveness**
Juan Martín Gómez Penedo, Julian Rubel, Tobias Krieger, Nicolás Alalú, Anna Margarete Babl, Andrés Roussos, and Martin grosse Holtforth
 Patient–therapist in-session interpersonal complementarity in higher affiliative (i.e., warm and friendly) behaviors during the initial and working phases of cognitive–behavioral treatments for depression is associated with a stronger therapeutic alliance. In terms of outcome, overly dominant patients benefited more from a nonreciprocal relationship in the dominance dimension, whereas submissive patients benefited more from reciprocity in that dimension. Overly “nurturant” patients had better outcomes when they performed more affiliative behaviors than the therapists and reported a stronger alliance when they presented patient–therapist complementarity at high or low levels of affiliation behaviors.
- 593 **Interpersonal Dynamics and Therapeutic Relationship in Patients With Functional Somatic Syndromes: A Metasynthesis of Case Studies**
Juri Krivzov, Fleur Baert, Reïtske Meganck, and Shana Cornelis
 Emotional avoidance and traumatic interpersonal history may play a role in the etiology and treatment of mind-body disorders. Therapists and health care providers should be sensitized for possible therapeutic impasses and adapt their strategies toward patients' interpersonal dynamics: pleasing others, controlling others, and emotional avoidance.
- 608 **Do Therapists Improve in Their Ability to Assess Clients' Satisfaction? A Truth and Bias Model**
Brian TaeHyuk Keum, Katherine Morales Dixon, Dennis M. Kivlighan Jr., Clara E. Hill, and Charles J. Gelso
 We found that therapists improve in their accuracy in assessing clients' satisfaction with clinical experience. Therapist became more accurate as they conducted more sessions with individual clients but did not gain as much accuracy with respect to seeing subsequent clients. Therapists improved significantly in their ability to accurately track client satisfaction in shorter treatments while accuracy remained consistently high and stable in longer treatments.

- 621 Examining Racial Microaggressions in Group Therapy and the Buffering Role of Members' Perceptions of Their Group's Multicultural Orientation
D. Martin Kivlighan III, Adriana G. Swancy, Enrique Smith, and Courtney Brennaman
This study sought to examine the presence and impact of racial microaggressions in therapy groups. Results indicated that 72% of participants reported experiencing at least one racial microaggression over the course of group therapy. Additionally, the relationship between REM members' experiences of racial microaggressions and perceptions of group cohesion differed based on members' perceptions of their group's cultural comfort.
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November 2021

Volume 68
Number 6

Articles

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- 629 **An Intersectional Approach to Understanding LGBTQ+ People of Color’s Access to LGBTQ+ Community Resilience**
Joshua G. Parmenter, Renee V. Galliher, Elizabeth Wong, and D. Perez
This study found that LGBTQ+ POC felt connected to the broader LGBTQ+ community due to shared narratives and engagement in social justice, but simultaneously felt the negative effects of exclusion, disempowerment, and invisibility by the predominantly White LGBTQ+ community. LGBTQ+ POC felt a strong connection with other LGBTQ+ POC and made space within the broader, White LGBTQ+ community to help cope with exclusion.

- 642 **The Hurdles Are High: Women of Color Leaders in Counseling Psychology**
Evelyn A. Hunter, Madison A. Hanks, Andrea Holman, Donielle Curry, Batsirai Bvunzawabaya, Bianca Jones, and Tahirah Abdullah
Women of Color leaders in Counseling Psychology engage culturally relevant leadership styles that center reflexive self-awareness, intentionality toward justice-oriented aims, and engaged critical conversations that spark organizational change. Although WoC leaders experience unique leadership challenges rooted in the complexities of their racial-gendered experiences, the blending of their personal and professional identities into leadership roles offers unique and transformative strengths in leadership spaces as demonstrated in the Society of Counseling Psychology.

- 657 **“What American Dream Is This?”: The Effect of Trump’s Presidency on Immigrant Latinx Transgender People**
Roberto L. Abreu, Kirsten A. Gonzalez, Cristalis Capieño Rosario, Louis Lindley, and Gabriel M. Lockett
Little research to date has explored how immigrant Latinx transgender community members are specifically impacted by Trump’s anti transgender and anti-Latinx behaviors and policies. The current study indicates that immigrant Latinx transgender people face discrimination and oppression because of the intersection of White supremacy, xenophobia, and cissexism, but are also coping and resisting the current political climate.

- 670 **A Daily Diary Study of Minority Stress and Negative and Positive Affect Among Racially Diverse Sexual Minority Adolescents**
Ethan H. Mereish, Robert Miranda, Jr., Yang Liu, and David J. Hawthorne
The findings of this study demonstrate that stigma and unique stressors are pervasive experiences in sexual minority adolescents’ daily life, and these daily experiences are associated with greater negative affect.



- 682 Patients' Individual Differences in Implicit and Explicit Expectations From the Therapist as a Function of Attachment Orientation
Sigal Zilcha-Mano, Tohar Dolev-Amit, Hadar Fisher, Tsachi Ein-Dor, and Bernhard Strauß
 The article demonstrates how expectations from the therapist can be assessed using both explicit and implicit measures. Findings suggest that pretreatment attachment orientation can predict implicit and explicit expectations from the therapist, and suggest that potential adverse effects of insecure attachment can be mitigated when the therapist becomes an attachment figure.
- 696 Separating the Effects of Improvements and Deteriorations in Mechanisms on Outcome Using the Asymmetric Effects Model
Qiwu Sun, Mattias Holmqvist Larsson, and Fredrik Falkenström
 Previous mechanisms of change research have assumed that improvements and deteriorations in the candidate mechanism affect outcomes equally but in opposite directions. Using the newly developed asymmetric fixed effects (AFE) model, we show how to separate improvements from deteriorations in working alliance to relax and test the assumption of symmetric effects on outcome. This method generates new possibilities for studying fluctuations in potential mechanisms of change at the within-person level.
- 705 Depression and Mentalizing: A Psychodynamic Therapy Process Study
Kari Halstensen, Rolf Gjestad, Patrick Luyten, Bruce Wampold, Pehr Granqvist, Gry Stålsett, and Sverre U. Johnson
 Emotional and relational changes related to psychodynamic therapy are likely to be followed by reductions in depressive symptoms over the course of therapy. Between-person improvements in mentalizing were related to reductions in depressive symptoms, but within-person change in mentalizing was not found to be a mechanism of change in depression. Further research is needed to examine the role of mentalizing skills as a factor contributing to the depressed individual's ability to profit from treatment.
- 719 Savvy Investments or Formative Endowments? Disentangling Causal Direction in the Association Between Parental Support and Self-Efficacy in STEM University Students
Rajiv K. Amarnani, Simon Lloyd D. Restubog, Prashant Bordia, and Sarbari Bordia
 This longitudinal study of STEM university students revisited the classic finding that support from others (e.g., parents) builds confidence. We found that this relationship is actually bidirectional—support builds confidence, while confidence in turn attracts support—which had downstream implications for whether these students actually persisted in their programs.
- 730 Group Counseling Change Process: An Adaptive Spiral Among Positive Emotions, Positive Relations, and Emotional Cultivation/Regulation
Meifen Wei, Li-fei Wang, and Dennis M. Kivlighan Jr.
 The results show how a group psychotherapy intervention influences positive changes for children and adolescent clients from elementary and middle schools. Results indicated that positive emotions (i.e., gratitude and basic psychological need satisfaction) and positive relations (i.e., teacher–student relationship and perceived social support) had reciprocal effects with emotional cultivation (regulation) to mutually influence one another over the course of the group intervention.

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Articles

- 1 The Stench of Bathroom Bills and Anti-Transgender Legislation: Anxiety and Depression Among Transgender, Nonbinary, and Cisgender LGBTQ People During a State Referendum
Sharon G. Horne, Mallaigh McGinley, Nedim Yel, and Meredith R. Maroney
 This study suggests that public debate over and legislative attempts to restrict protections for lesbian, gay, bisexual, transgender, and queer (LGBTQ) people present an ongoing threat to mental health for LGBTQ people, and particularly for transgender, nonbinary, and gender diverse (TNG) individuals. Even when legislative outcomes are favorable, LGBTQ people may suffer anxiety and depression, especially those who identify as TNG or who have histories of gender-based victimization.
- 14 Devalued, Overdisciplined, and Stereotyped: An Exploration of Gendered Racial Microaggressions Among Black Adolescent Girls
Cecile A. Gadson and Jioni A. Lewis
 The purpose of this study was to explore subtle forms of gendered racism experienced by Black adolescent girls in their everyday lives. Findings can be applied to researchers, practitioners, educators, and policymakers to create supportive programming for Black girls and reform the school policies and practices that have a disproportionately negative impact on the lives of Black girls.
- 27 Helping Skills Courses: The Effects of Student Diversity and Numeric Marginalization on Counseling Self-Efficacy, Counseling Self-Stigma, and Mental Health
Lydia HaRim Ahn, Dennis M. Kivlighan Jr., and Clara E. Hill
 We examined the effects of racial/ethnic diversity (mix of students from different racial/ethnic groups) and numeric marginalization (the number of students sharing a student's racial/ethnic identity) on counseling self-efficacy, counseling self-stigma, and mental health in helping skills classes at a large mid-Atlantic university. The effects of both diversity and numeric marginalization depended on students' self-identified race/ethnicity. Findings suggest that classroom composition is related to personal outcomes in higher education classes. Therefore, instructors should focus on increasing the racial/ethnic diversity of the class and preventing numeric marginalization to the extent possible.
- 37 Hidden in Plain Sight: Working-Class and Low-Income Atheists
Dena M. Abbott, Debra Mollen, Jessica A. Boyles, and Elyxus J. Anaya
 The study suggests that working-class and low-income atheists, compared to atheists with more class privilege, perceive their atheism as less central to their identity and are less likely to engage with other atheists. They employ strategies to manage disclosure and concealment of their atheism in line with unique risks to job security and relationships given the religiousness of their families and communities.

- 51 The Evolution of Patients' Concept of the Alliance and Its Relation to Outcome: A Dynamic Latent-Class Structural Equation Modeling Approach
Christoph Flückiger, Adam O. Horvath, and Holger Brandt
This study provides empirical evidence that the majority of clients who indicate that their condition is improving from session to session, also evolve their conceptualization of the nature of their alliance with the therapist. In other words, most of the potentially good outcome patients see their collaborative relation to their therapist as a more integrated concept. If what was observed in this study can be generalized, it would imply that therapist also need to adjust their relational focus to accommodate such, more integrated notion of the alliance during therapy.

- 63 Changes in Client Attachment in Relation to Client Distress: A Response Surface Analysis
Mira An, Justin W. Hillman, Dennis M. Kivlighan, Jr., and Clara E. Hill
When client's attachment anxiety diminishes or remains low across nine sessions, they subsequently report being less psychologically distressed. Hence, therapists need to be particularly aware of times when clients are anxiously attached and help them reduce the attachment anxiety or help them maintain low levels of attachment anxiety.

- 74 Working Alliance, Therapist Expressive Skills, and Client Outcome in Psychodynamic Therapy
Lydia HaRim Ahn and Dennis M. Kivlighan Jr.
This study suggests that therapists should use expressive skills when clients who usually do not have a strong working alliance (WA) have a stronger than usual WA in the preceding session. The study highlights the importance of monitoring the strength of the WA and with less engaged clients, only using expressive techniques when the alliance is stronger than usual for the client.

- 85 Trajectories of Change in Chronic Depression: Differences in Self-Criticism and Somatic Symptoms Between Users of Antidepressants and Nonmedicated Patients
Andreas Høstmælingen, Pål Ulvenes, Helene Amundsen Nissen-Lie, Mikkel Eitelsen, and Bruce E. Wampold
Self-criticism may play a key role in maintaining chronic depression. This study suggests that chronically depressed patients not using antidepressant medication (ADM) while in psychotherapy reduce self-critical thought content more than patients using ADM. It is possible that patients using ADM experience emotional blunting which make them less accessible to psychotherapeutic interventions addressing dysfunctional rumination or emotional processing.

- 100 Longitudinal Measurement Invariance of the Behavioral Health Measure in a Clinical Sample
Jeremy J. Coleman, Yixiao Dong, Denis Dumas, Jesse Owen, and Mark Kopta
The current study suggests that instruments used in ROM, specifically the BHM-20, may not be accurate in measuring client outcomes longitudinally. This is problematic because it means that client feedback data collected in session about their experience in therapy is not accurate. The current study offers a refined version of the BHM-20 called the BHM-17, which can be used longitudinally with improved accuracy.

- 111 The Compounded Effects of Classism and Racism on Mental Health Outcomes for African Americans
Klaus E. Cavallheri and Melanic M. Wilcox
This study demonstrated that experiences of classism are related to greater stress and poorer well being of African Americans, but that experiencing more of both racism and classism was actually related to less stress and better well being—consistent with a resilience (rather than greater risk) perspective. The findings highlight the importance of understanding classism for African Americans, and the need for greater examination of intersecting experiences of discrimination and oppression.

- 121 Career Decision-Making in Unemployed Portuguese Adults: Test of the Social Cognitive Model of Career Self-Management
Robert W. Lent, Maria do Céu Taveira, Joana Soares, Cátia Marques, Bárbara Cardoso, and Íris Oliveira
We tested a theoretical model of career decision-making in unemployed Portuguese adult workers. The findings suggest that the model may help to explain how adult workers remake career decisions in the context of unemployment, extending prior research testing the model largely with college students in the U.S. who are making initial career decisions.
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Articles

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- 129 **Second-Generation Asian American Women’s Gendered Racial Socialization**
Lydia HaRim Ahn, Brian TaeHyuk Keum, Gintare M. Meizys, Adil Choudry, Michelle A. Gomes, and Lei Wang
 Asian American women receive multiple gendered racial socialization messages from their parents, peers, and mass media that are rooted in interlocking systems of oppression surrounding racism and sexism. The present study provides implications for future prevention and intervention efforts to mitigate these negative effects on Asian American women.
- 146 **Testimonios in the Mouth of the Dragon: A Call for Black Liberation in Psychology**
Daniela G. Dominguez and Monica Noriega
 This article aims to disrupt the dominant use of positivist methodologies in antiracist research in Counseling Psychology. The authors underscore the important role that testimonio research and Liberation Psychology can play in psychologists’ efforts to increase their racial consciousness and understanding of allyship.
- 157 **A Mindfulness-Based Mobile Health (mHealth) Intervention Among Psychologically Distressed University Students in Quarantine During the COVID-19 Pandemic: A Randomized Controlled Trial**
Shufang Sun, Dunhua Lin, Simon Goldberg, Zijiao Shen, Pujing Chen, Shan Qiao, Judson Brewer, Eric Loucks, and Don Operario
 This study provides initial empirical support for a tailored, mHealth approach in the application of both mindfulness and social support-based interventions to mitigate psychological distress among young adults in the pandemic context. Successful implementation and dissemination of this or similar approaches have the potential to improve access to psychological services, reduce provider burden, and enhance public mental health.
- 172 **Therapist and Counseling Center Effects on International Students’ Counseling Outcome: A Mixed Methods Study**
Brian TaeHyuk Keum, Theodore T. Bartholomew, Krista A. Robbins, Andres E. Pérez-Rojas, Allison J. Lockard, Dennis M. Kivlighan Jr., Ellice Kang, Eileen E. Joy, and Sergio Maldonado Aguiniga
 International student clients reported worse distress outcomes at the end of therapy than domestic students at college counseling centers. This difference varied across therapists and counseling centers and was significant for centers that saw a small percentage of international students but not for centers with a large percentage of international students in the caseload. We identified both challenges and culturally-informed approaches among therapists and centers that contribute to differential counseling outcomes among international students.
- 188 **Understanding Interdependence of Patients’ and Therapists’ Affect Experiencing Examination at Sample and Individual Difference Levels**
Virgilio Barrio Seala, Ashley K. Randall, and Sigal Zilcha-Mano
 Patients’ and therapists’ affective experiences (AEs) are interdependent throughout treatment, suggesting that patients’ emotional engagement in treatment is formed interdependently with the therapist’s emotional engagement. Whereas this finding was found at the sample level, individual differences are also evident, suggesting that patients’ and therapists’ AEs interdependence may be explained by patients’ ability to form a strong therapeutic relationship at both post- and state-like levels.

- 199 **The Triadic Effect: Associations Among the Supervisory Working Alliance, Therapeutic Working Alliance, and Therapy Session Evaluation**
Judith A. Gerstenblith, Kathryn V. Kline, Clara E. Hill, and Dennis M. Kivlighan Jr.
This study provides preliminary evidence for the link between supervision and the psychotherapy process and outcome. In general, our results suggest that some supervisors form stronger alliances with their trainees, and the clients of those trainees report stronger alliances and better session quality. Hence, some supervisors are more effective than others at developing alliances with their supervisees, and this effectiveness is linked to a better client-perceived therapy process and outcome.
- 211 **Anxious Attachment Improves and Is Predicted by Anxiety Sensitivity in Internet-Based, Guided Self-Help Cognitive Behavioral Treatment for Panic Disorder**
Dina Zalaznik, Asher Y. Strauss, Asala Halaj, Isaac Fradkin, David D. Ebert, Gerhard Andersson, and Jonathan D. Huppert
Results of this study suggest that anxious attachment improves following an internet-based intervention for panic disorder with minimal therapist contact (ICBT). This improvement appears to follow changes in anxiety sensitivity, or fear of one's bodily sensations, which are likely facilitated by self-driven techniques of cognitive restructuring and exposure. Thus, interpersonal factors can improve in psychotherapeutic interventions even when the involvement of the therapist is limited and the focus is on cognitive and behavioral change.
- 222 **Evaluating Psychotherapist Competence: Testing the Generalizability of Clinical Competence Assessments of Graduate Trainees**
Molly Kring, Jessica K. Cozart, Morgan T. Sinnard, Alayna Oby, Emily H. Hamm, Nickolas D. Frost, and William T. Hoyt
Ratings of clinical competence are used to determine adequate progress for trainees in HSP and to document competence for accreditation and licensure bodies. This study examined sources of error in these ratings to provide guidance on improving assessment procedures. For competence assessments based on direct observation, we recommend evaluation by multiple raters for each trainee, and observation times of at least 60 min per trainee.
- 235 **Ceiling Effects Indicate a Possible Threshold Structure for Working Alliance**
Scott T. Meier and Thomas H. Feeley
This review found evidence of widespread ceiling effects on measures of the working alliance, suggesting that the alliance typically develops early in psychotherapy. Findings can inform the development of new theory about the early therapy environment as well as new methods to assess the alliance.
- 246 **Perfectionistic Concerns and Psychological Distress: The Role of Spontaneous Emotion Regulation During College Students' Experience With Failure**
Jennifer L. Woodrum and Jeffrey H. Kahn
This study suggests that people who are critical of themselves for being less than perfect find failure upsetting because they have trouble managing their emotions concerning the failure. Failing to reappraise the situation and ruminatively thinking about the failure are the principal problems that lead to greater distress.

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Articles

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- 257 Awareness, Social Cognition, and Commitment: Developing a Social Justice Orientation in Psychology Training Programs
George V. Gushue, Tina R. Lee, Nadine Postolache, Jacqueline Yang, Jonathan Godinez, Samantha Samel, and Allie Vaknin
 This study sought to better understand the factors supporting the promotion of social justice interests and commitment among psychologists in training. We found that trainees who had developed a greater critical awareness of systemic inequality and who endorsed egalitarian attitudes were more likely to be aware of racism in various forms (e.g., blatant racism, institutional racism, and White privilege) and that this was related to endorsing social justice beliefs, expectations, interests, and commitment. These findings highlight the importance of critical attention to social and historical context in clinical training.
- 268 The Myth of the Safe Space: Sexual Orientation Disparities in Therapist Effectiveness
Joanna M. Drinane, Tangela Roberts, Kate Winderman, Vanessa Frierson Freeman, and Yu-Wei Wang
 This study suggests that for certain psychotherapy outcomes (symptoms and global mental health, specifically), some therapists have queer clients who experience more change and others have heterosexual clients who experience more change. This highlights a need for improved feedback loops with therapists to enhance their ability to provide care equitably and effectively across groups.
- 276 Cultural Humility, Working Alliance, and Outcome Rating Scale in Psychodynamic Psychotherapy: Between-Therapist, Within-Therapist, and Within-Client Effects
Katherine Morales Dixon, Dennis M. Kivlighan, Jr., Clara E. Hill, and Charles J. Gelso
 When clients see their therapist as more humble toward their cultural identity than their therapist usually is, next session alliances are strong but this effect is attenuated over time. When clients see their therapist as less humble toward their cultural identity than their therapist usually is, the immediate subsequent session alliance is weak but strengthens over the next several sessions. Therefore it is important for therapists to find ways to demonstrate cultural humility week-to-week.
- 287 Center Effects, Therapist Effects, and International Student Clients' Drop Out From Psychotherapy
Theodore T. Bartholomew, Krista A. Robbins, Libeth Valdivia-Jauregui, Allison J. Lockard, Andres E. Perez Rojas, and Brian Taehyuk Keum
 Clinicians working in college counseling are tasked with needing to be competent in providing services to international student clients (ISCs). We demonstrate that therapists and centers are differentially effective in preventing drop-out, operationalized as client failure to attend the last scheduled session, of international students. These findings can be taken to inform efforts to enhance specific practices that may mitigate these differential effects.
- 298 Cross-Cultural Differences in Adult Attachment and Depression: A Culturally Congruent Approach
Chiachih DC Wang, Ung Jui GuBasa Han, Wen Jui Zuo, and Danna Bismar
 This cross-cultural study suggests that greater attachment anxiety and avoidance is associated with diminished social self-efficacy, which in turn increases depressive symptoms for U.S. individuals, but not for Koreans. Korean individuals show a greater level of approval of others (AO), and AO functions differently in the attachment-depression relation between U.S. and Korean individuals. This research points to the push for the importance of understanding the critical role of cultural factors in a significant influence on mental health.

- 311 **The Fat Acceptance Scale: Development and Initial Validation**
Colleen A. Kase and Jonathan J. Mohr
The fat-acceptance movement arose to combat the significant discrimination that fat individuals encounter in a variety of contexts. This article describes the development of a new scale measuring fat-accepting beliefs, attitudes, and behaviors (the Fat-Acceptance scale; FAS). The results of this study suggest that the FAS may be a reliable and valid tool for researchers, clinicians, and advocates interested in fat acceptance.

- 326 **The Anger-Depression Mechanism in Dynamic Therapy: Experiencing Previously Avoided Anger Positively Predicts Reduction in Depression via Working Alliance and Insight**
Joel M. Town, Fredrik Falkenström, Allan Abbass, and Chris Stride
This study highlights the importance of addressing avoided feelings of anger when treating depression in dynamic therapy. The effectiveness of this approach involves monitoring the development of the therapeutic alliance and acquisition of patient insight, according to a patient's personality functioning.

- 337 **A Longitudinal Analysis of Reflective Functioning and Its Association With Psychotherapy Outcome in Patients With Depressive and Anxiety Disorders**
Anna Babl, Thomas Berger, Hannah Decurtins, Inke Gross, Tom Frey, Franz Caspar, and Svenja Taubner
The present study suggests that the capacity to perceive and understand oneself and others (mentalization) improves over the course of cognitive-behavioral therapy in patients with depressive and anxiety disorders. Further, mentalization is associated with psychotherapy outcome: after a session where patients positively deviated from their own average ability to mentalize, they reported lower depression severity; patients with overall higher levels of mentalizing over the course of treatment and with positive deviations from their own average ability to mentalize, tended to have less interpersonal problems during psychotherapy. It may thus be beneficial for practitioners to find ways of improving their patients' ability to mentalize over the course of treatment and thereby interpersonal problems (possibly also other psychotherapy outcomes).

- 348 **Facilitating Exploration in Psychodynamic Psychotherapy: Therapist Skills and Client Attachment Style**
Morgan S. Anvari, Vardaan Dua, Jose Lima-Rosas, Clara E. Hill, and Dennis M. Kivlighan, Jr.
In middle sessions of psychodynamic psychotherapy, therapists should be aware of both their skills and client attachment style. If therapists want clients who are low in attachment anxiety to explore affect, they could focus on feelings. If therapists want to help clients are high in attachment anxiety explore cognitions and behaviors, they could use reflections of feelings and open questions for thoughts.

- 361 **Testing the Effectiveness of an SCT-Based Training Program in Enhancing Health Self-Efficacy and Outcome Expectations Among College Peer Educators**
Abigail S. Dubovi and Hung-Bin Sheu
This study demonstrates that peer health education training programs, grounded in social cognitive theory, may be helpful in promoting self-efficacy and positive outcome expectations for engaging in health-related behaviors among undergraduate peer educators. The results suggest that when well designed and implemented, the process of training undergraduate peer educators may be utilized as a health promotion intervention in and of itself.

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- 375 Exploring Black Adolescent Males' Experiences With Racism and Internalized Racial Oppression
Tamba-Kuii M. Bailey, Christine J. Yeh, and Kachiside Madu
 For Black Adolescent males, they may experience racism in and outside of school. This study explores racial socialization, racism, and internalized racial oppression as experienced by a sample of Black adolescent males in high school. This study provides mental health professionals with knowledge of these experiences and provides recommendations for working with Black adolescent males based on their stated needs for support.
- 389 Walking Out on Hate: A Qualitative Investigation of How and Why White Supremacists Quit Hate Groups
Jackson B. Liguori and Lisa B. Spanierman
 The present study suggests that ex-White supremacists who leave their extremist communities and speak out against hate are influenced to do so by social interactions, undergo personal transformations, and ultimately adopt antihate activist identities. Using findings from this study, psychologists can work with hate group exit intervention specialists to develop therapeutic approaches for both hate group exit and postexit rehabilitation.
- 403 Policy Attitudes Toward Adolescents Transitioning Gender
Kevin Silva, Cambrian M. Nauman, Elliot A. Tebbe, and Mike C. Parent
 This study advances the understanding of factors related to supporting affirming social and medical transition for transgender youth. It demonstrates the role of transphobia and the need for closure as they relate to nonaffirming attitudes.
- 416 Cultural Stress, Daily Well-Being, and Internalizing and Externalizing Symptoms Among Hispanic College Students
Seth J. Schwartz, Alan S. Waterman, Cory L. Cobb, Miguel Angel Cano, Carolina Scaramatti, Alan Meca, Simon Ozer, Colleen Ward, Sofia Puente-Durán, Elma I. Lorenzo-Blanco, Jennifer B. Unger, Maria C. Duque, Saskia R. Vos, Ingrid Zeledon, Maria Fernanda Garcia, and Charles R. Martinez Jr.
 Our results indicate that cultural stressors can lead to symptoms of anxiety and depression among Hispanic students by compromising their daily well-being. It is essential for university administrators and professors to incorporate more Hispanic-focused content in classes, for universities to hire more Hispanic administrators and faculty, and for a reduction in zero-sum competition among students with a corresponding increased focus on establishing a better balance of communal and individual achievement. Hispanic students may also benefit from efforts to help them manage cultural stressors and to maintain stable levels of daily well-being.
- 430 Asian American People's Intragroup and Intergroup Collective Action: Identifying Key Correlates
Steve Chao and Bonnie Moradi
 Results of this study suggest that Asian American people's greater perceptions of discrimination, lower achievement orientation beliefs, and greater sense of intergroup solidarity with other people of color may promote intergroup collective action with other people of color. We also found that each of these factors along with greater intragroup solidarity may predict intragroup collective action with other Asian American people.

- 443 Other- (vs. Self-) Oriented Meaning Interventions Enhance Momentary Work Engagement Through Changes in Work Meaningfulness
Katarzyna Cantarero, Wijnand A. P. van Tilburg, and Ewelina Smoktunowicz
 This research examines a short, online and inexpensive tool that can boost work meaningfulness and, consequently, momentary work engagement. Employees that focused on the meaning of their work not only experienced higher levels of work meaningfulness, but also higher momentary work engagement. When employees were asked to focus and write down how their work served a greater good, it elevated work meaningfulness as compared to focusing on how one's work allowed them to advance their personal career. This suggests that only other-oriented and not self-oriented sources of meaning can help to bolster momentary work engagement through changes in work meaningfulness.
- 452 The Identification and Validation of Five Types of Career Indecision: A Latent Profile Analysis of Career Decision-Making Difficulties
Nimrod Levin, Yuliya Lipshits-Braziler, and Itamar Gati
 This study identified five types of individuals distinguished by their salient causes of career decision-making difficulties. Ascertaining clients' type of career indecision enables tailoring the career counseling process to their specific needs.
- 463 Applying Social Cognitive Career Theory to the Study Abroad Choice Process
Ruogu J. Wang and Robert W. Lent
 We adapted two models of social cognitive career theory to examine college students' study abroad interests and intentions. Findings suggested that this theoretical approach may shed useful light on decisions to study abroad, an experience that can have important implications for the personal, academic, and career development of students.
- 474 The "Dyadic Dance": Exploring Therapist-Client Dynamics and Client Symptom Change Using Actor-Partner Interdependence Modeling and Multilevel Mixture Modeling
Xu Li
 It may be helpful for the therapist to maintain some levels of consistency or stability in how they evaluate their therapy process and therapeutic relationship with the client. A therapist-client dynamic pattern characterized by therapist and client maintaining a level of consistency of their own perceptions but also having mutual influences appears to be associated with more positive client symptom improvement. To achieve this, the therapist may try to stay open to the client's experiences by which they let themselves be impacted while also maintaining an internal stability within themselves. The therapist may also exert necessary therapeutic influences on the client when clinically indicated.
- 490 The "Roller Coaster Ride": A Longitudinal Investigation of the Dynamic Relationship Between Chinese Counseling Trainees' Self-Efficacy and Their Clients' Outcome and the Mediating Effects of Working Alliance and Session Evaluation
Xu Li, Feihan Li, Chahua Liu, Shitao Chen, and Yuge Han
 Therapist trainees' self-efficacy and their clients' distress temporally predict each other from session to session in a reciprocal way. When feeling more confident about their therapy sessions, trainees appear to build better relationships with clients, which leads to client symptom relief; in contrast, when clients are more distressed, it seems hard to have a strong working alliance, which undermines trainees' subsequent confidence.
- 506 The Interplay Between Agency and Therapeutic Bond in Predicting Symptom Severity in Long-Term Psychotherapy
Simone Tenissen, Julia Huber, Christoph Nikendei, Henning Schauenburg, and Ulrike Dinger
 This study suggests that both agency and therapeutic bond are relevant predictors of psychotherapy outcome. Healthy patients should both experience a strong bond with their therapist and also feel empowered to influence their own therapeutic process as needed. When agency and therapeutic bond levels are vastly different, therapists should intervene especially in cases of low therapy

- 518 **How Young Psychotherapists Experience Working With Older Patients**
Annika Boschann, Uwe Krähnke, Silke Wiegand-Greife, and Eva-Marie Kessler
 This study provides an initial insight into young psychotherapists' perceptions of and experiences with older patients, including several particularities and clinical challenges that the work with older patients might pose for young psychotherapists. A detailed insight into how young psychotherapists experience working with older patients can also be useful for the training and education of young health care providers who work with older adults.
- 531 **Psychotherapy Session Frequency: A Naturalistic Examination in a University Counseling Center**
David M. Erekson, Russell J. Bailey, Kara Cattani, Jared S. Klundt, Austin M. Lynn, Dallas Jensen, Brett M. Merrill, Dominic Schmuck, and Vaughn Worthen
 The present study suggests that session frequency may affect both the efficacy and efficiency of psychotherapy in working clinics. It highlights the importance of including session frequency in both research applications and clinical considerations. This may be particularly important in the context of increasing demand for mental health services.
- 541 **The Development and Psychometric Evaluation of the Objectification Perpetration Scale**
Abigail R. Riemer, Gemma Sáez, Rebecca L. Brock, and Sarah J. Gervais
 The present research provides a new tool to assess men's objectification of women through their behaviors, cognitions, and beliefs. This work suggests that men perpetrate sex-based or appearance-based objectification, each of which have distinct connections to sexual violence perpetration and misogynistic attitudes.
- 554 **Socially Prescribed Perfectionism Predicts Next-Day Binge Eating Behaviors Over 20-Days**
Kathleen E. Merwin, Sean P. Mackinnon, Rosin M. O'Connor, and Gordon L. Flett
 It has been suggested that people may be more likely to binge eat when they believe that others expect and demand perfection from them. This idea was supported by the results of this study, which showed that when a nonclinical sample of emerging adults (i.e., 18-25-year-olds) reported strongly believing that others expect and demand perfection from them (i.e., socially prescribed perfectionism), they were more likely to have more intense binge eating behaviors on days when they engaged in binge eating behaviors.

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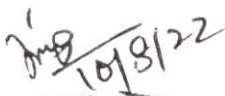
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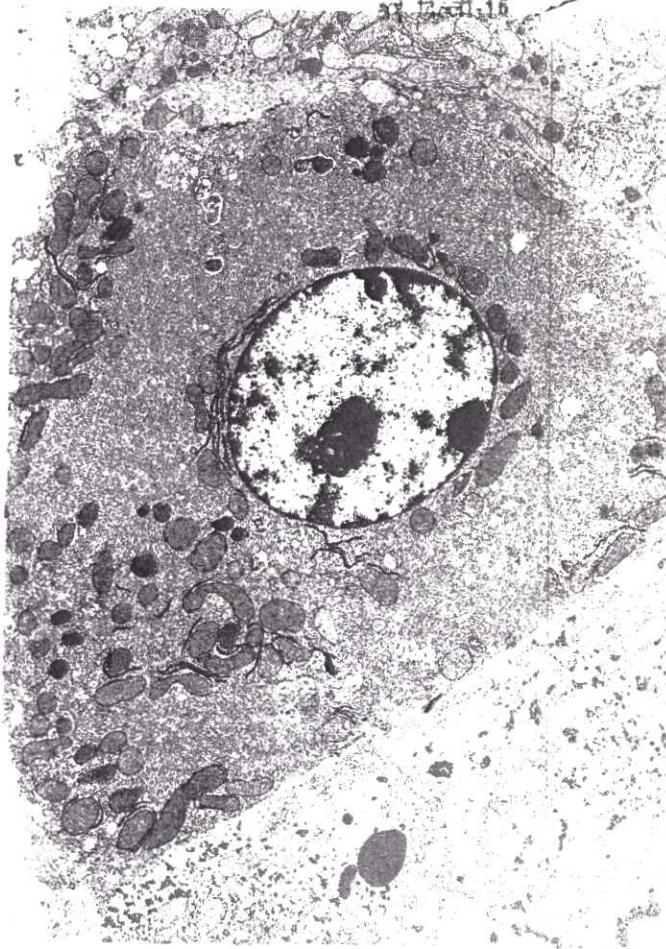
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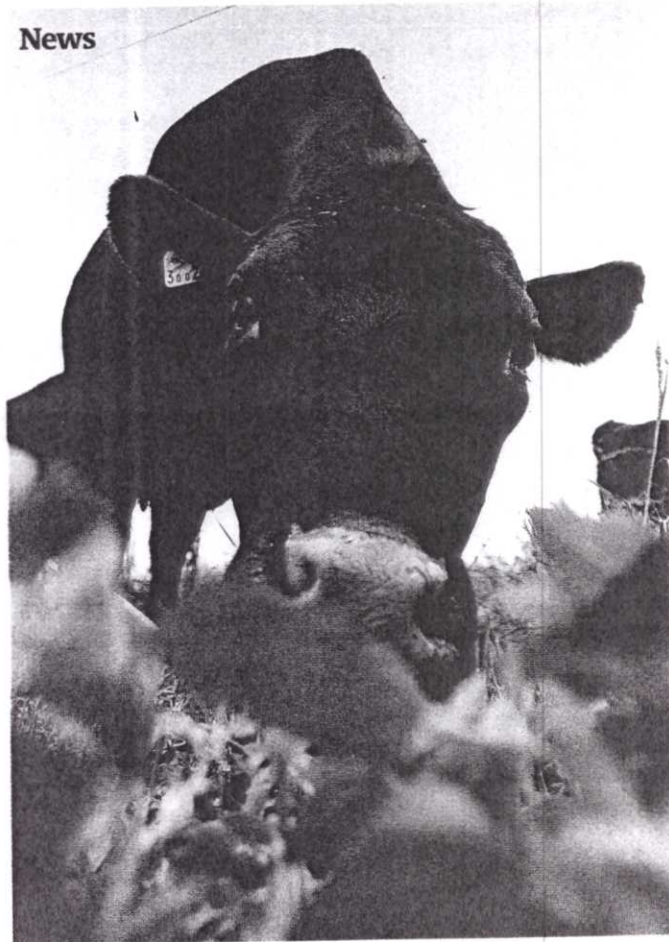
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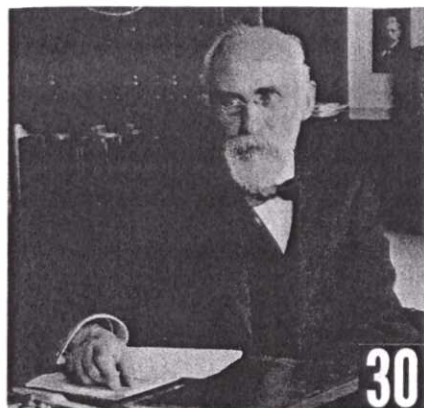
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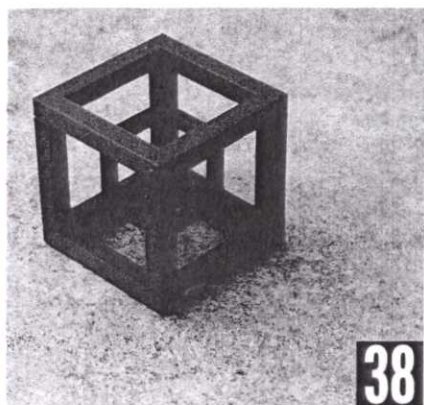


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World War I tore apart a close-knit international physics community. During the interwar period, two famous physicists attempted to repair those shattered bonds.



38 Simulating four-dimensional physics in the laboratory

Hannah Price

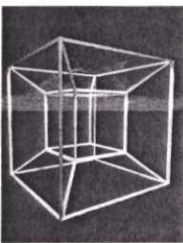
Experimental methods to imitate extra spatial dimensions reveal new physical phenomena that emerge in a higher-dimensional world.



46 Unveiling exozodiacal light

Eckhart Spalding, Denis Defrère, and Steve Ertel

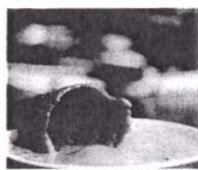
Nulling interferometry draws aside bright stellar glare to probe fine dust in extrasolar systems that may hamper future searches for Earthlike worlds.



ON THE COVER: The tesseract is the four-dimensional counterpart to the three-dimensional cube, much as the cube is the three-dimensional counterpart to the two-dimensional square. The pale gray structure on the cover is a common way to represent a tesseract in three dimensions. On **page 38**, Hannah Price describes both the rich theory of 4D lattices and the experimental tricks to simulate them in the 3D world. Inspired by the search for topological physics, the techniques work for ultracold atoms, photonics, acoustics, and electric circuits, among other systems. (Image by Robert Brook/Science Photo Library/Alamy Stock Photo.)

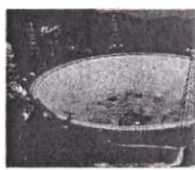
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Mpemba effect

The idea of water freezing faster when it starts at a higher temperature, known as the Mpemba effect, is counterintuitive enough. Now researchers in Canada and France have demonstrated the inverse: that under certain conditions, a cold particle can heat up faster than a warmer counterpart. physicstoday.org/Apr2022a



Fast radio bursts

The observed polarization of fast radio bursts increases and decreases with wave frequency, a recent study shows. The finding implies that the mysterious cosmic pulses originate in supernova remnants or other active regions where magnetic fields strip lower-energy waves of their initially strong polarization. physicstoday.org/Apr2022b



Fusion diagnostics

Companies in the fledgling nuclear fusion industry often make bold claims. Now, as part of a US government program, scientists are working with fusion firms to install diagnostic instruments and gather data on the performance of fusion plasmas and the experimental devices that manipulate them. physicstoday.org/Apr2022c

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Electrification of cars and trucks likely won't disrupt the grid • Ballooning satellite populations in low Earth orbit portend changes for science and society

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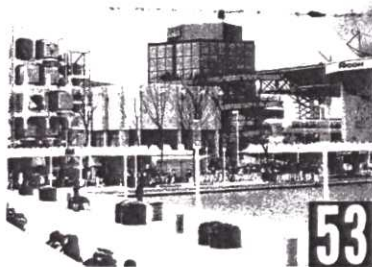
How did Mars lose its atmosphere and water? — Bruce M Jakosky

64 Back scatter

A wandering vortex



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26 The secret world in the gaps between brain cells

Charles Nicholson

Innovations in diffusion analysis and imaging techniques have gradually revealed the ubiquity and importance of extracellular space.

34 ABACC to the future

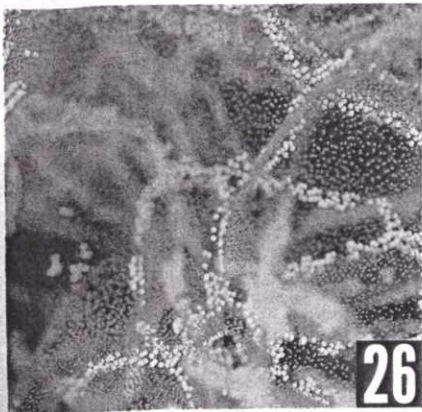
Christopher Dunlap

At the end of the Cold War, two South American rivals built a system of nuclear safeguards that culminated in the 1991 founding of a bilateral organization, ABACC. Can that nonproliferation regime be exported?

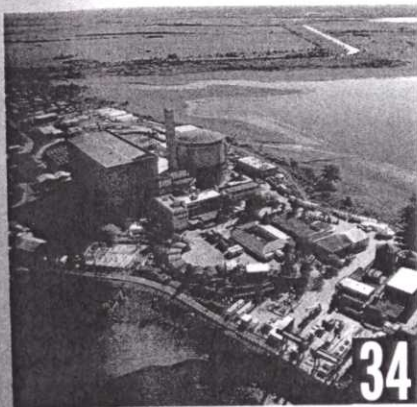
42 Quantum materials out of equilibrium

Martin Rodriguez-Vega, Maia G. Vergniory, and Gregory A. Fiete

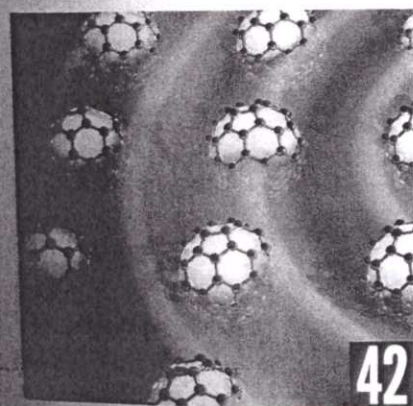
Illuminating materials with lasers can create intriguing magnetic and topological states of matter.



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ON THE COVER: In *Neural Migration*, the artist and neuroscientist Greg Dunn depicts radial glia (black) creating new neurons (white). On page 26, Charles Nicholson focuses not on brain cells but on the gaps between them. Unlike the vast open spaces shown on the cover, most extracellular space in real brain tissue is only tens of nanometers wide and thus difficult to probe. Diffusion analysis and imaging techniques have gradually been able to characterize that space, which is essential for passing electrical and chemical signals. (*Neural Migration*, 2021, Greg Dunn, www.gregdunn.com.)

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BIMLA BUTI

Bimla Buti

Theoretical physicist Bimla Buti speaks to *PHYSICS TODAY*'s Toni Feder about her plasma-physics research, her experience with Subrahmanyan Chandrasekhar as her PhD adviser, and the foundation she started to promote education and computer literacy in India and to reduce the gender gap in STEM. physicstoday.org/May2022a



IS BLM

Helium shortage

Helium is again in short supply, forcing some scientists to shut down nuclear-magnetic resonance spectrometers, scanning tunneling microscopes, and other pieces of equipment that require the noble gas to stay cold. *Physics Today*'s David Kramer reports on the fourth major helium shortage since 2006. physicstoday.org/May2022b



NARA/AIP/EVA

Farm Hall

In 1945 Allied intelligence recorded the conversations of 10 German nuclear scientists who were detained at Farm Hall in England. *PHYSICS TODAY*'s Ryan Dahn explores why, 30 years after the public release of the transcripts, historians are still debating if the Nazi regime was pursuing an atomic bomb. physicstoday.org/May2022c

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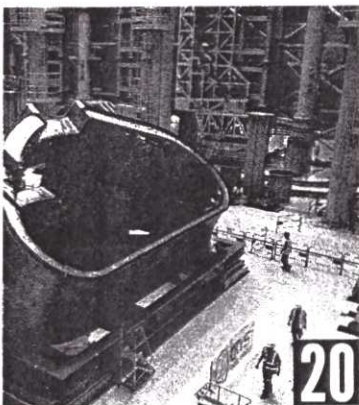


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Quasicrystals and the birth of the atomic age – *Luca Bindi and Paul J. Steinhardt*

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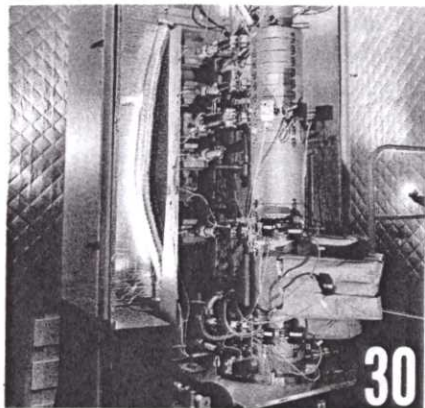
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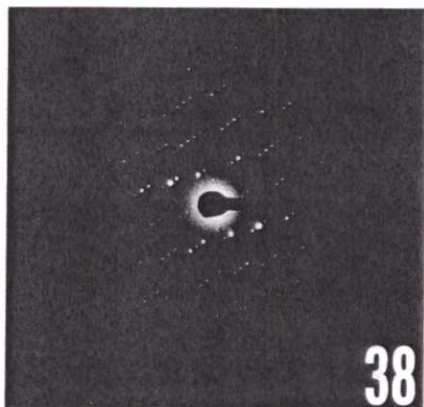
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SPECIAL FOCUS ON ATOMIC-RESOLUTION ELECTRON MICROSCOPY

30 A quantum lab in a beam

Sergei V. Kalinin, Stephen Jesse, and Andrew R. Lupini

Advances in electron microscopy have revolutionized atomic-scale imaging, characterization, and manipulation of materials.

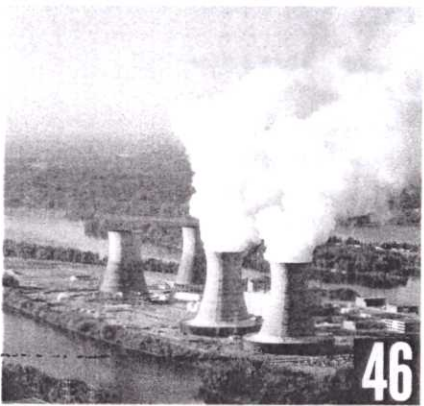


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38 Unlocking the potential of microcrystal electron diffraction

Michael W. Martynowycz and Tamir Gonen

Structural biologists are using cryogenic electron microscopy to resolve atomic-scale structures of proteins from nanocrystals.



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46 Why did the Three Mile Island Unit 1 reactor close?

Hannah Pell, Ryan Hearty, and David Allard

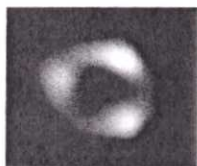
Navigating the future of US commercial nuclear power requires understanding how regional energy markets, state regulations, and community activism influence the life span of nuclear plants.



ON THE COVER: This school in Kharkiv, Ukraine, was hit by Russian missiles in March. Much of V. N. Karazin Kharkiv National University and other parts of the city have also been demolished. Even as some scientists leave Ukraine for temporary posts elsewhere, people the world over are thinking about how to rebuild science in the country when peace returns. In Russia, meanwhile, scientists are increasingly isolated as their international colleagues weigh showing condemnation and preserving communication. For more on how the war is affecting scientists and science, see **page 22** (Photo by iStock.com/OLeksandr_Kr.)

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EHT COLLABORATION

Sagittarius A*

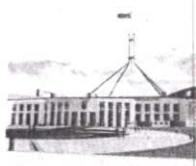
Three years after sharing a historic image of the Messier 87 galaxy's supermassive black hole, the Event Horizon Telescope collaboration unveiled last month the portrait of its second subject: Sagittarius A*, the 4-million-solar-mass black hole at the center of the Milky Way physicstoday.org/Jun2022a



KARL GABL

Karl Gabl


When Simone Moro and other elite mountaineers need to decide whether to risk the elements and ascend to a summit, they rely on the predictions of 75-year-old Austrian meteorologist Karl Gabl. Vedrana Simičević profiles the alpine forecaster who Moro has said "is never wrong" physicstoday.org/Jun2022b



JOHN J. HAYES FOR PHYSICS TODAY

Australian science

Scientists in Australia were paying close attention to last month's general election. Many have expressed concern over a government minister's decision to block the national research council from funding multiple peer-reviewed proposals. Benjamin Puckett describes the rift between academics and the government physicstoday.org/Jun2022c

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In Ukraine, science will need rebuilding postwar; in Russia, its isolation could endure • Carbon dioxide removal is suddenly obtaining credibility and support

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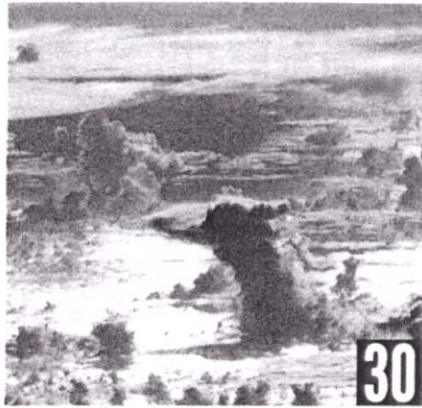
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30 Thermodynamics of the climate system

Martin S. Singh and Morgan E O'Neill

To understand Earth's climate, think of it as a giant, planetary-scale heat engine that drives the circulation of the oceans and atmosphere.



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38 A. V. Hill: The man behind the initials

Andrew Brown

The Nobel Prize winner was one of the founders of biophysics. He also helped rescue thousands of academics from Nazi-dominated Europe and contributed significantly to UK defense efforts in World War II.

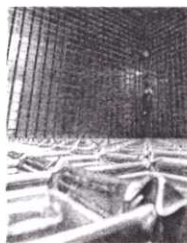


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46 Building a ship in a bottle for neutrino science

Anne Heavey

In a former gold mine in South Dakota, an international particle-physics experiment will delve into the unexplained matter-antimatter imbalance that gave rise to the universe.



ON THE COVER: Before the Deep Underground Neutrino Experiment (DUNE) comes on line, the smaller two-detector protoDUNE program at CERN will test the underlying design. Seen here is the inside of one of protoDUNE's liquid-argon time-projection chambers; special lights that protect the photon-detection elements impart a gold hue. On page 46, Anne Heavey explores the numerous challenges to making the world's largest particle detector a reality. (Courtesey of Maximilien Brice/CERN.)

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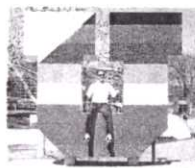


NASA/ESA

JWST science

Half a year after its launch the *James Webb Space Telescope* is poised to begin science operations. Rachel Berkowitz examines the JWST's first cosmic targets and explains how the early observations will both deliver compelling science and demonstrate what the telescope can do.

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MATHEW CRAWLEY

LGBT+ physicists

Several new surveys show the importance of a welcoming work environment for retaining LGBT+ physicists. "The absence of a negative climate is not sufficient to support LGBT+ people," says physics education researcher Ramon Barthelemy. "You have to have an actively inclusive community."

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SHAABAN KHALIL

Arab Physical Society

The newly founded Arab Physical Society aims to promote "excellence and creativity in the field of physics for the benefit of the Arab region and humanity." The organization already has more than 500 members. PHYSICS TODAY's Toni Feder speaks to some of its leaders about their priorities.

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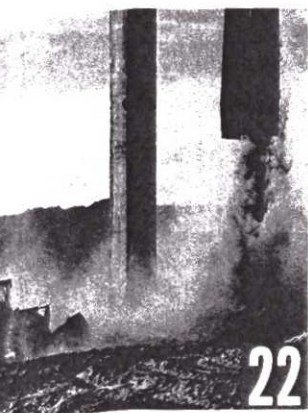


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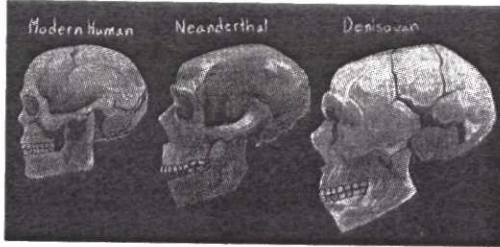
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मनुष्य की उत्पत्ति- भाग 1

एक मनुष्य होने के नाते हमारी अस्मिता क्या है? मनुष्य और मनुष्य-जैसी प्रजातियों के बीच क्या नाता रहा है? सबसे शुद्ध मनुष्य कौन हुआ, जब हम सभी के पूर्वज एक ही हैं? आज विज्ञान की मदद से, हम अपने और हजारों वर्ष पहले की मनुष्य प्रजातियों के जीवाश्मों के डीएनए पढ़कर न सिर्फ अपने प्रागैतिहास की समझ को गहरा कर रहे हैं, बल्कि ऐसे कई सबूत भी पा रहे हैं जो आज मनुष्यों के बीच नस्लीय गैर-बराबरी की दलील को खण्डित करते हैं। 2019 में एकलव्य द्वारा आयोजित एक सार्वजनिक व्याख्यान में ऐसे ही कुछ विषयों पर चर्चा हुई। उक्त लेख में आइए पढ़ते हैं, इस चर्चा के पहले भाग को और इस विषय में अपनी समझ को और पुरख्ता बनाते हैं।

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पृथ्वी की विगत जलवायु के बारे...

हमारी धरती एक अद्भुत कहानीकार है। हालाँकि, इसके पास अपनी जलवायु की कहानी बताने के लिए शब्द नहीं हैं, फिर भी पृथ्वी ने डायरियाँ रखी हैं। ये डायरियाँ हमें लाखों साल पहले की पृथ्वी पर जलवायु परिस्थितियों का लेखा-जोखा बताती हैं। इनका उपयोग करके, हमारे वैज्ञानिक ऐसे मॉडल बनाने में सक्षम हुए हैं, जो एक पोर्टल के रूप में कार्य करते हैं, और हमें अतीत को देखने और साथ ही, हमारे ग्रह के भविष्य की भविष्यवाणी करने में मदद करते हैं। आइए, हमारी पृथ्वी की डायरी के कुछ पन्नों पर एक नज़र डालते हैं, और जलवायु मॉडल के बारे में थोड़ा और जानते हैं।

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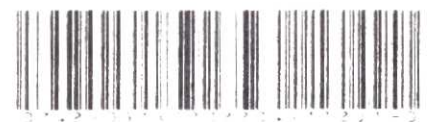
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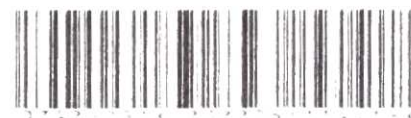
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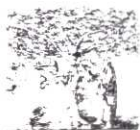
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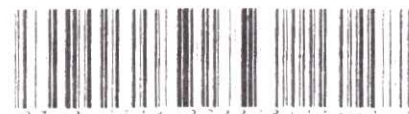
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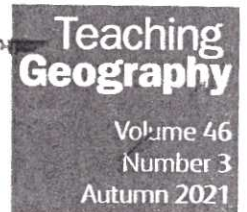
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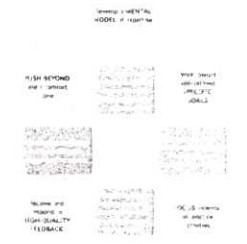
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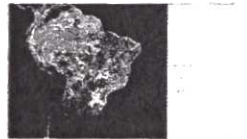
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Cover image: A couple with t-shirts asking for a cleaner and more sustainable fashion industry during the Jobs, Justice and Climate rally on 3 July 2015, Toronto, Canada. © Shutterstock/Arindambanerjee



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#Let's Beat Corona Together

'Choice' in Choice-based Credit System: A Geometric Interpretation

Basab Chaudhuri*

Higher education all over the world is continuously evolving. New subjects are being introduced; methodologies are being worked out; prescriptions are being written daily with the objective of educating students in larger numbers and improving the quality of education. In recent years, the most used phrase in higher education has been CBCS – Choice-based Credit System, and NEP–2020–the National Education Policy. In various interactions, CBCS has been spoken of, but not with the conviction as expected. Instead, question has arisen as to whether the CBCS can be made operational in the Indian context. The cafeteria system in higher education – choose as you please – is a far cry from reality. Our mindset does not allow quick adaptation, rather questions are raised, doubts are expressed and a sense of 'cannot be achieved' works through our mind. Before we start, we often falter, and before we falter, we often fail.

Real academics is not about humbugs, but about reflectors who reflect upon issues and bring solutions on the table. India as a whole provides less indigenous solutions although problems abound. It is an interesting case study for all.

Choice

Any 'learner-centered' academic system must give choice to the learner. The learner in the student must arise and awake. Academics is primarily a systematic way of empowering a learner. The more the empowerment, the more is the chance of the learner to succeed in the real world. In old days, complexity and interactions in the world were less; with every passing day, the complexities are increasing. Linearity in thinking was sufficient to tackle life's problems in old times; today it no longer works. That is why a more non-linear system of education is necessary. Choice fits in there.

In many seminars and conferences, discussion was held about CBCS. A lot was told, but many were not convinced. Idea-wise, what is CBCS? Let us try out a geometric interpretation (Figure-1). There are three axes in the figure-1: Arts, Science and Commerce. These are more common themes or subjects which are chosen by the students.

Ordinarily, when a student chooses a given number of subjects in Arts, he moves linearly along the Arts axis. His interests are linear; his attainments are linear too. If such a student is allowed to take one or two subjects of science, there is a transformation. From linear, he moves to a planar system. An example here will suffice. An ant

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*Let noble thoughts come to us from all sides.
Rig Veda*

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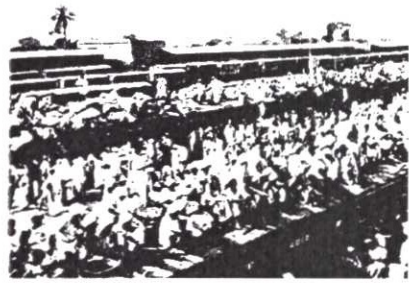
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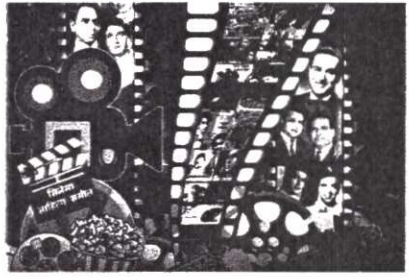


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