

EDUDOC SERVICES: CURRENT CONTENT



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September- 2019



LIBRARY AND DOCUMENTATION DIVISION

NATIONAL INSTITUTE OF EDUCATION

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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 September, 2019.

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 selecting/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 receive your views and comments.

(Prof. Saroj Yadav)
Chairperson, LDD

Sr. No.	Name of Journals	Vol.	Issue	Month	Year	Pages
❖	Biology					
1.	American Biology Teacher	81	1 2 3 6	Jan Feb Mar Aug	2019	2-5
2.	Journal of Biological Education	53	4	Sep	2019	85
❖	Curriculum					
3.	Curriculum Inquiry	49	3	Jun	2019	27
4.	Curriculum and Teaching	34	1	Jan-Jun	2019	26
❖	Economics					
5.	Economist	432	9158 9159 9160 9161	31 Aug 7 Sep 14 Sep 21 Sep	2019	57-64
6.	Economic and Political weekly	54	26&27 28 29 30 31 32 33 34 35 36	29 Jun 13 Jul 20 Jul 27 Jul 3 Aug 10 Aug 17 Aug 24 Aug 31 Aug 7 Sep	2019	35-56
7.	Quarterly Journal of Economics	134	3	Aug	2019	136
❖	Educational Psychology					
8.	Educational Psychologist	54	1 2	Jan-Mar Apr-Jun	2019	67-68
❖	Educational Research					
9.	Educational Action Research: an International Journal	27	1 2	Feb May	2019	65-66
10.	Educational Research	61	3	Sep	2019	69
11.	Scandinavian Journal of Educational Research	63	6	Oct	2019	
❖	Educational Technology					
12.	British Journal of Educational Technology	50	2 3 4 5	Mar May Jul Sep	2019	6-16

13.	<u>Journal of Computer Assisted Learning</u>	35	1 2 3 4	Feb Apr Jun Aug	2019	87-90
❖	Environmental Education					
14.	Environmental Conservation	46	3	Sep	2019	4
15.	<u>Globalisation, Societies and Education</u>	17	2	Apr	2019	79
❖	Geography					
16.	<u>The Geographical Journal</u>	185	1 2 3	Mar Jun Sep	2019	75-77
17.	The Geography Teacher	16	3	Jul-Sep	2019	78
18.	National Geographic Magazine	7	2	Sep	2019	126-127
❖	Higher Education					
19.	University News	57	34 36 37	26 Aug 9 Sep 16 Sep	2019	161-163
❖	Library Science					
20.	IASLIC Bulletin	64	2	Jun	2019	80
21.	SRELS Journal of Information Management	56	3	Jun	2019	158
❖	Linguistics					
22.	Indian Literature: Sahitya Akademi's Bi-Monthly Journal *	63	4(312)	Jul-Aug	2019	81-83
23.	Language Learning	69	2	Jun	2019	99-100
24.	Language Problems & Language Planning	43	2	May	2019	101-102
25.	Chakmak (HIN)	396	9	Sep	20169	19
❖	Mathematics Education					
26.	<u>Mathematical Thinking and Learning</u>	21	3	Jul-Sep	2019	125
27.	School Science and Mathematics	119	2 3 4 5	Feb Mar Apr May	2019	150-153
❖	Physics					
28.	Physics Today	72	8	Aug	2019	133-134
❖	Population Education					
29.	<u>Daedalus</u>	148	1 2 3	Winter Spring Summer	2019	28-34
❖	Psychology					
30.	<u>Journal of Applied Social Psychology</u>	49	8	Aug	2019	86
31.	Journal of Counseling Psychology	66	3	Apr	2019	91-92

32.	<u>Journal of Cross-Cultural Psychology</u>	50	6	Jul	2019	93
33.	<u>Journal of Educational Psychology</u>	111	3 4	Apr May	2019	94-97
34.	<u>Psychology in the Schools</u>	56	8	Sep	2019	135
35.	<u>Current Science</u>	117	4 5	25 Aug 10 Sep	2019	20-25
36.	New Scientist	243	3242 3243 3244 3245 3246	10 Aug 17 Aug 24 Aug 31 Aug 7 Sep	2019	128-132
37.	Science	365	6453 6454 6455 6456	9 Aug 16 Aug 23 Aug 30 Aug	2019	139-146
38.	Science Reporter	56	8 9	Aug Sep	2019	147-148
39.	Science, Technology and Society	24	2	Jul	2019	149
❖	Science Education					
40.	Education in Science		275 276	Feb May	2019	70-73
41.	<u>Resonance: Journal of Science Education</u>	24	9	Sep	2019	137
42.	<u>Scientific American</u>	321	3	Sep	2019	154-155
❖	Social Science					
43.	Mainstream	57	21 28 29 31 32 33 34 35 37 38 39	11 May 29 Jun 6 Jul 20 Jul 27 Jul 3 Aug 10 Aug 17 Aug 31 Aug 7 Sep 14 Sep	2019	103-124
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46.	Yojana	63	8 9	Aug Sep	2019	64-165
47.	Young Children	74	1 2	Mar May	2019	166-169
❖	Special Education					
48.	British Journal of Special Education	46	1 2	Mar Jun	2019	17-18

49.	<u>Intellectual and Developmental Disabilities</u>	57	4	Aug	2019	84
50.	<u>Journal of Learning Disabilities</u>	52	4	Jul-Aug	2019	98
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About Our Cover

The red fox kit on the cover was photographed in a wooded area in North Hero, Vermont, along the shores of Lake Champlain. North Hero is one of the many islands found in Lake Champlain, which is 120 miles in length and separates Upstate New York from Vermont.

Red foxes (*Vulpes vulpes*) can live in diverse habitats, including forests, farmland, grasslands, suburban areas, mountains, and deserts. They are lone hunters, and their diet comprises a wide range of foods, including rabbits, rodents, birds, fishes, frogs, fruits, and vegetables.

Red foxes mate during winter, and a female can produce a litter of two to 12 kits. The kit that is pictured on the cover was part of a litter of seven. At birth, the kits are brown or gray; within four weeks they typically grow a new red coat. The den for this litter of kits was dug at the base of a tree on the slope that went from the wooded area to the lakeshore. Both parents take care of their kits from spring until fall, as was the case for this family of kits. The photographer had the pleasure of watching this family (from a distance) on her property.

The average life span in the wild for the red fox is two to four years. They can weigh 6–24 pounds.

This photo was taken using a Nikon D3200 with an f-stop of f/5.6, ISO of 3200, and focal length of 300 mm.

The photographer is Nancy L. Elwess, a Distinguished Teaching Professor in the Department of Biological Sciences at the State University of New York at Plattsburgh. She lives in North Hero, Vermont.



THE AMERICAN BIOLOGY TEACHER



About Our Cover

Shown on this month's cover are two bonobos (*Pan paniscus*) that are part of a bonobo colony at the Jacksonville Zoo and Gardens in Jacksonville, Florida. Only nine facilities hold this endangered species in North America. Bonobos are found naturally living only in the Democratic Republic of Congo, and it is estimated that a maximum of only 15,000 to 20,000 bonobos remain in the wild.

Bonobos and chimpanzees both share ~98% of their genome in common with humans. Genetic mapping suggests that more than 4 million years ago, a common ancestor diverged into humans, followed by chimps and bonobos diverging to become distinct species about 1 million years ago. It is amazing to realize that bonobos and chimpanzees are more closely related to humans than they are to gorillas!

Although bonobos and chimpanzees are ~99% genetically similar to each other, they display several important behavioral differences. Strong bonds form in bonobo society, particularly among females, and they appear to have frequent same-sex sexual activity to reinforce these bonds, resolve conflict, and calm aggression. In contrast, chimpanzees are male dominant and have demonstrated the use of physical violence to settle conflict and lethal aggression toward other chimpanzee groups. "Make love, not war" seems to be the guiding mantra of bonobo society, in contrast to chimpanzee society (and many might say, human society as well).

The image was taken at the Jacksonville Zoo and Gardens using a monopod-mounted Sony SLT-A77V with a Sony 70-440 GSSM lens at 360 mm. The photographer is James Ekstrom, Professor Emeritus in Science at Phillips Exeter Academy in Exeter, New Hampshire (jimekstrom@gmail.com).

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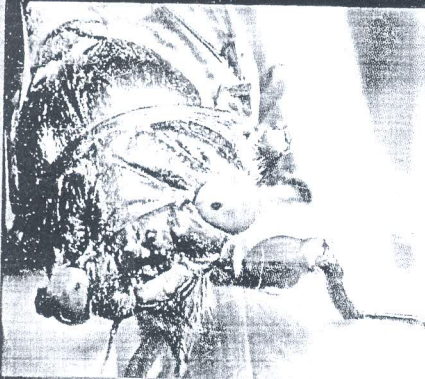
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About Our Cover

While many think that the 17-year periodic cicada (*Magicicada septendecim*) is the longest-lived insect that honors belongs to the African mound-building termite queen, which lives 50+ years as an adult, while her workers typically live only a year or so. And there is a species of longhorn beetle that spends 55+ years as a nymph foraging in decaying wood. Still, the periodic cicada is a rather amazing creature, spending all but a month or so of its 17-year life as a nymph, burrowing underground looking for root xylem fluid. It emerges in great numbers (an average of 0.5 metric tons per hectare) with clockwork regularity every 17 years in a period of 7–10 days from mid-April through June. There are some 30 broods of periodic cicadas in the United States, each with a unique schedule. At times, some or all members of a brood get off schedule and emerge early for reasons not fully understood, typically 4 years ahead of schedule. The periodic cicada was a member of brood X, scheduled to reemerge in 2021. This cicada was true to its schedule (it emerged 4 years early in 2017) (itating typically begins within 5–15 days of emergence, the males awaiting the hardening of their tymbals (the sound-producing organs used to attract mates) and the females their ovipositors. Once these structures have hardened, the males gather in "chorus centers" where they make their tremendous sounds to attract females. After mating, the females use their ovipositors to lay 200–600 eggs in distinctive egg nests each containing 20–30 eggs, near the ends of twigs in surrounding trees. 6–8 weeks later, the nymphs emerge, drop to the ground, and immediately burrow into the ground in search of root xylem fluids to begin their 17-year journey to adulthood, carrying on the tradition, while both adult males and females die shortly after mating and laying eggs. The image was taken by Bob Ford, Frederick Community College, Frederick, Maryland.

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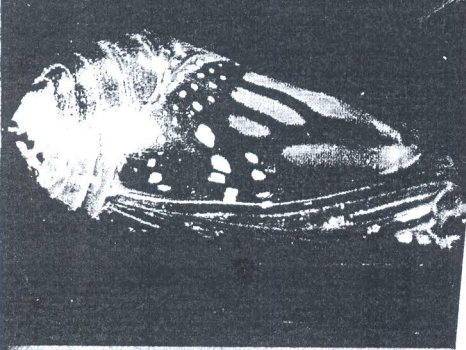
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About Our Cover

This monarch butterfly (*Danaus plexippus*) chrysalis (pupa) was attached to a common milkweed (*Asclepias syriaca*) plant found in Westminster, West, Vermont. The monarch chrysalis starts as a pale green color, speckled with glistening dots of gold, and becomes transparent just before the adult butterfly emerges. When this specimen emerged it was easily identified as a male by the black oval genital patch located on each hindwing.

In mid- to late May, monarchs arrive in New England from the overwintering grounds in the Sierra Madre of central Mexico. Once they reach their summer habitat, they lay eggs on the underside of milkweed leaves. One female can lay up to five hundred eggs in her lifetime. The caterpillar will spend up to two weeks eating and growing before transforming into a chrysalis.

The adult butterflies born in New England in late July and August do not reproduce immediately because of decreasing light and dropping temperatures. Instead they spend their time feeding on nectar in preparation for the arduous migration south. During the fall months this generation of adults migrates to the overwintering sites in Mexico. In early spring, the overwintered generation will begin their journey north and lay eggs to begin a new generation. It can take as many as three or four generations before the monarchs reach New England again, making the ones that arrive the great and great-great grandchildren of the overwintering monarchs.

This photo was taken by Abigail P. Littlefield, Professor of Natural Science (retired) at Landmark College (Putney, Vermont), using an Olympus E-M10II with a macro lens, F8, ISO 800.

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British Journal of Educational Technology

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आस्मां में चिड़िया और बागों में फूल देखता रहा।

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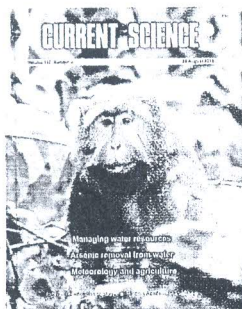


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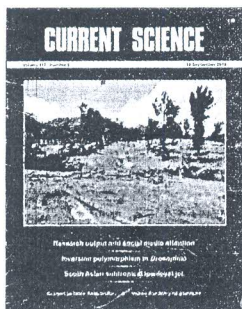
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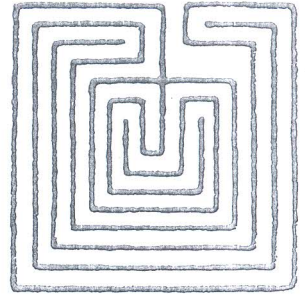


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"Access to Justice"

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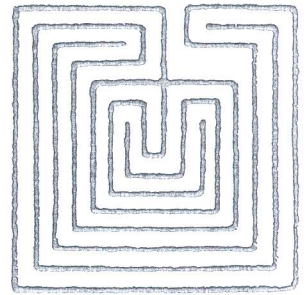
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Journal of the American Academy of Arts & Sciences



"Why Jazz Still Matters"

Volume 148, Number 2; Spring 2019

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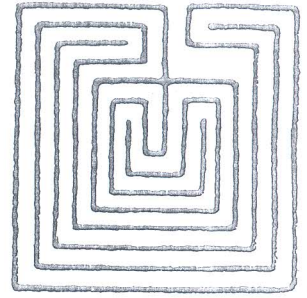


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Journal of the American Academy of Arts & Sciences



"Inequality as a Multidimensional Process"

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Oil on canvas. 237 cm x 216 cm (height x width). Museo Nacional
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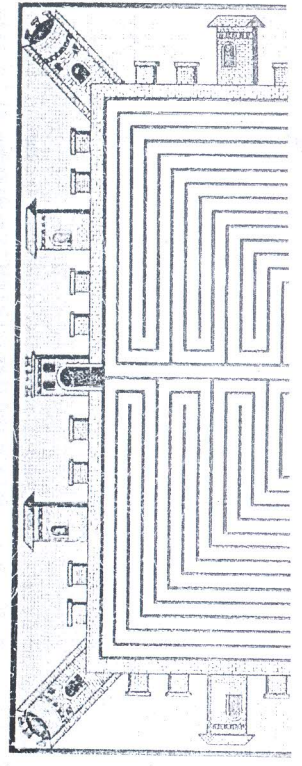
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- ▣ Agrarian Potential of In-Situ Water Harvesting

DISCUSSION**POSTSCRIPT****Neglect of Stunted Children**

The overall budget for direct nutrition interventions is low across the four states that account for 45% of stunted children in the country, thus showing the neglect of human capital. page 43.

Entitlement and Access in PDS

A study of the different pathways of access, quantities and prices, quality of grains and services, as also group disadvantage in the public distribution system page 13

Need for More Homework

Two articles examine the draft National Education Policy 2019 and find that there are many aspects in it that need to be looked at and also overhauled. pages 17 and 20

Attending to Large Dams

India's water management policies must take into account the potential crisis stemming from over 4,000 large dams due to their ageing and structural deterioration. page 37

Support in Mental Health

People who have lived experiences of recovery in mental health can help those in the mental health system to experience a peer's caring and supportive assistance. page 27

Rethinking India's Approach to China's BRI

10 India should leverage China's new focus on the Belt and Road Initiative in order to transform South Asia's geo-economic landscape. — *Zorawar Daulet Singh*

Exploring the Markers of Differential Access to PDS

13 The differential access to the public distribution system in India is explored by analysing the heterogeneous class, caste and gender positioning of beneficiaries, the concept of "effective prices," and the quality of grains and services. — *Mamata Pradhan, Devesh Roy*

A Country in Search of an Education Policy

17 Some of the relevant concerns in the draft National Education Policy 2019 around the question of provisioning for good quality universal education are examined. — *Praveen Jha, Pooja Parvati*

Basic Blunders and Fundamental Flaws

20 The draft National Education Policy 2019 suffers from deep-seated flaws like disempowerment of states, retreat from RTE Act and National Curriculum Framework, and cultural and ideological blinkers. — *Vivek Monteiro*

Peer Support in Mental Healthcare

27 "Peers" are a resource that can be tapped into for supporting people in the mental health system, offering the peers financial and social empowerment, while providing patients a peer's caring and supportive assistance. — *Prateeksha Sharma*

Ageing Large Dams and Future Water Crisis

37 The consequences and probable remedies of the crisis stemming from the more than 4,000 ageing large dams, which are the blind spots of India's water policies, are analysed. — *J Harsha*

Fiscal Challenges in Scaling Up Nutrition Interventions

43 An analysis of the delivery of direct nutrition interventions in four states underscores the need for enhancing fiscal priority for these interventions. — *Saumya Shrivastava, Nilachala Acharya, Chandrika Singh, Vani Sethi, Richa S Pandey, Rabi Parhi, et al*

Middle-class Women's Labour Migration in Post-liberalised Cities

55 The patterns and trends of urban migration of middle-class women through the period of pre- and post-liberalisation and the socio-economic correlates of their contemporary migration are investigated. — *Tina Dutta, Annapurna Shaw*

Construing the Indian Middle-class Ideology

65 Most Hindi film stories revolve around affluent Indians and endorse the social, religious, and cultural values of the Hindu middle class, thus trying to construct a new form of nation and nationalism that is not fully inclusive. — *Amit Ranjan*

Socialism Is Dead, Long Live Socialism

73 Cuba's self-managing cooperatives, the preferred instruments for its transition to 21st-century socialism, have a fair chance of success, but uncertainties exist with respect to the project of "downsizing the state." — *Joseph Tharamangalam*

Agrarian Potential of In-Situ Water Harvesting

80 A case study of farm ponds in Jharkhand finds the contribution of these in increasing the agrarian surplus, but that its financial viability is scale-dependent with ponds of only a certain size. — *Nirmalya Choudhury, Meghna Mukherjee*

Birth of Democracy and the Death Knell of Capitalism

86 A response to "Death of Democracy: An Inevitable Possibility under Capitalism" (EPW, 25 August 2018)— *Aabid Firdausi M S, Siddik R*

Postscript

89 *Francis Kuriakose* on a Pondicherry that is slowly disappearing with the onset of rapid development; *Suvij Sudershan* on the depiction of middle-class anxiety in the films of West Bengal's most prolific auteurs; and Last Lines by *Ponnappa*.

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Review of Rural Affairs

The need to address the multidimensional nature of agrarian distress and the crises affecting the rural economy has been much deliberated upon. However, the proposed policies often deflect from the core structural problems that have a bearing on the issues besetting Indian agriculture, in general, and the farmers, in particular. A set of five papers discusses the dampers and drivers for building a resilient farming system in the country, such as the importance of the rural economy in the budgetary outlays of an agrarian state; the role of the Mahatma Gandhi National Rural Employment Guarantee Scheme as a coping mechanism for households facing increasing climate vulnerability; the ecological sustainability of agriculture across India; the performance of crop insurance and its adoption at the household level; and the impacts of capitalist development on rural livelihoods.

Rural Crisis in Punjab

The public expenditure on the rural sector in Punjab bypasses key sectors of rural development for administrative spending. Has this led to the unending rural crisis in the state? page 6

Risk Reduction in Telangana

The little amounts earned from the Mahatma Gandhi National Rural Employment Guarantee Scheme turn into the main source of income for households' sustenance during droughts. page 12

Ecological Sustainability

Any plan for sustainable development of agriculture must be cognisant of the need to preserve natural resources such as soil, arable land, and water. page 19

Crop Insurance

Farmers in India facing losses are often compensated only for the cost of cultivation, and even this amount is received after much delay. page 28

Cohesive Development Approach

An alternative development paradigm that explores the routes for diverting the capital inflow in the rural sector towards the protection of agriculture-related livelihoods is required. page 36

Review of Rural Affairs

Over the past several years, Indian agriculture has undergone significant changes by moving towards input-intensive cropping systems. However, the path of high external input agriculture has not only been unsustainable, but has also adversely affected agriculture-dependent livelihoods and the natural resource base of the economy. Developing a balanced and integrated agricultural system with limited use of chemical inputs would require a greater emphasis on climate-resilient crops. This edition of the Review of Rural Affairs brings together papers that help identify and formulate solutions to some of the problems that plague agriculture and the rural economy.

Towards a Resilient Farming System

5 The major growth episodes of Indian agriculture are closely associated with the initiation and spread of the green revolution paradigm and technology. This has placed enormous strain on the natural resource base leading to land degradation, decline in the levels of soil organic matter and loss of soil fertility. The alternative path for agriculture that takes agroecology as its core, however, makes a decisive shift away from the production-centric approach of the green revolution paradigm towards an ecosystem-centric view of agriculture. — *P S Vijayshankar*

Rural Economy, State and Public Policy: Exploring the Rural Crisis of Indian Punjab

6 The contemporary situation of Punjab's rural economy has been a subject of serious concern. Analysing the evolving levels and patterns of the public expenditure on the rural sector over time, it is found that there has been a progressive diversion of the public spending on the rural sector towards local-level administration, bypassing key sectors of rural development such as human resources development. This aspect has been a major driver of the unending rural crisis in the state. — *Baldev Singh Shergill, Ramanpreet Kaur*

Uncertain Climate, Vulnerable Livelihoods: Role of MGNREGS in Risk Reduction

12 Livelihoods in the semi-arid tropics are particularly vulnerable to climatic uncertainties and frequent droughts. The low levels of development of diversified livelihood options in the non-farm sector and a lack of skill base compel households to seek multiple low-income livelihoods in lean resource years. Among these, the Mahatma Gandhi National Rural Employment Guarantee Scheme has provided the most significant coping mechanism for most households, particularly the poorest and most backward sections. However, as the study of rural Telangana shows, challenges of implementation arise when the policy manifests on field realities which tend to reduce the effectiveness and weaken its impact. — *Manoj Jatav, Shreya Chakraborty*

Statewise Report Cards on Ecological Sustainability of Agriculture in India

19 In the context of increasing farmer distress and vulnerability to risks associated with climate change, the dependence of agriculture on natural resources requires that these are sustainably managed. Using a framework of indicators in the domains of pest management, fertiliser use, soil health, water conservation, biodiversity, and efficient use of inputs, statewise report cards on ecological sustainability of agriculture across India are provided. Much variation is found in the sustainability of production practices across the country, with some states characterised by high use of pesticides, low soil organic content, depletion of groundwater levels, low crop diversity, high energy use, and widespread nitrate contamination of groundwater. — *Divya Veluguri, Ramanjaneyulu G V & Lindsay Jaacks*

Crop Insurance in India: Where Do We Stand?

28 Programmes extending insurance cover for crops in India have long been in operation, but have not been able to include the majority of the agricultural sector within their ambit. Analysing the 70th Round Situation Assessment Survey data, the performance of crop insurance at the household level is examined and factors that determine its adoption are identified using an econometric analysis. The Pradhan Mantri Fasal Bima Yojana is then analysed by looking more closely at the structure of the scheme. The experiences of certain countries are also highlighted to provide a global perspective on improving crop insurance adoption in the country. — *Meenakshi Rajeev, Pranav Nagendran*

Capitalist Development and Rural Livelihoods: In Search of a Cohesive Development Approach

36 Indian agriculture has been facing an intrusion of large capital into its domain in various forms, such as contract farming, industrialised agriculture, and forcible acquisition of agricultural land for industrial plants. But, what are the impacts of such types of capitalist development on rural livelihoods? The study argues that reform in agriculture—through setting up of special agricultural zones and other similar means—needs to be undertaken for further rural economic development, in general, and for protection of agriculture-related livelihoods, in particular. Looking into the prospects of the rural industrial sector, it emphasises that the clustering of rural non-farm enterprises can pave the way for an alternative development paradigm. — *Subrata Dutta*

Political WEEKLY



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- ▣ The Enduring Legacy of Lenin

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How to Talk about Caste

Three accounts delve into the style, substance and aesthetic of Aniket Jaaware's *Practicing Caste: On Touching and Not Touching*. pages 17, 19 and 23

Composition of Public Debt

Most policymakers, including economic technocrats in government, have come to believe that public debt, fiscal deficits and interest rates are objectives in themselves rather than the instrumentalities that they actually are. page 89

Benchmark Index for Banks

An attempt to prepare a composite benchmark index with legal requirements and best practices available in literature on corporate governance in banks page 96

Resource of Genetic Wealth

The greatest asset in combating the effects of uncertain climate is agro-biodiversity because genetic diversity distributes risk and enhances the coping capacity of farmers. page 14

Kerala's Gold Jewellery Workers

A look at the migrant workers who are employed in the burgeoning gold retail houses, and the many facets of their service conditions page 106

Tribal Politics in Jharkhand

10 The realisation that the interest of tribes does not lie in division but in forging an alliance, opens up the space for an alternative political path in Jharkhand. — *Virginus Xaxa*

A New Development Model for the New Economy

12 The role of the government is to not only be a more effective provider of learning and health, but also an agent for greater access to opportunity and changing patterns of ownership at all levels. — *Avinash Persaud*

Agro-biodiversity as a Resource

14 It is important to move away from an exclusive focus on techno-fixes when dealing with climate change. — *Suman Sahai*

Destitute Thinking

17 Ethical impoverishment, Aniket Jaaware's *Practising Caste: On Touching and Not Touching* tells us, is a precondition and the initial form of new thinking and living. Destitution prepares the ground for inventing new forms of sociality. — *Udaya Kumar*

Just Us

19 Rejecting the politics of identity and victimhood, *Practising Caste* articulates the politics of radical narcissism of a "just us" that tries to disinherit the knowledge received from the classical Sanskrit texts, philosophy, sociology and anthropology. — *Sanil V*

Aesthetics of a Text

23 Aniket Jaaware's text has an aesthetic of simplicity of thought and language, removing the moral coercion that forces one to refer to the scholarly work of the "Academic Aakas" or the little gods of academia. — *Gopal Guru*

Amalgamation of Existing Laws or Labour Reform?

33 A close reading of the Draft Labour Code on Social Security, 2018 suggests that neither have redundant provisions been removed, nor existing ones overhauled to make employment benefits available in a more effective manner. — *Santanu Sarkar*

Kuki Perspective on Migration

38 The Kukis's unique pattern of migration is described and the formulation of a "wave model" of all migration taking place in a similar pattern is attempted. — *Haoginlen Chongloi*

How Much Public Debt Is Too Little?

89 The entire literature on public debt is on determining "how much is too much." However, both the level and composition of public debt should be considered while framing fiscal rules. — *Pronab Sen*

Corporate Governance in Banks in India

96 While several committees have examined ways to improve corporate governance in banks in India, an attempt is made to prepare a benchmark index for the board composition of corporate governance. — *Rekha Misra, Anwesha Das*

Gold Jewellery Making and Migrant Labour Force in Kerala

106 Resorting to a labour process framework, the process of recruitment and the composition of the workforce in the gold jewellery market in Kerala is elucidated. — *Sumeetha M*

Beyond Marx, the Enduring Legacy of Lenin

114 The "Organisation question" is faced by those whose goal is to carry out the project of reducing various human relations of oppression while establishing an ecologically stable balance between human society and nature. — *Achin Vanaik*

No Breather for Food Subsidy Bill

122 The inferences made in "Price Deficiency Payments and Minimum Support Prices: A Study of Selected Crops in India" (*EPW*, 19 May 2018) by T Haque and P K Joshi about why price deficiency payment schemes will not reduce the food subsidy bill are debated. — *Sudhakar Gummula*

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Losing Their Wombs

Not just has the uterus become a “disposable” entity, but the labour of migrant workers and the bodies of women are also being ruthlessly exploited. page 10

Challenges of Public Administration

An examination of innovations in public service through the Prime Minister's Awards for Excellence in Public Administration for 2005–06 to 2016–17 page 100

What Is Skill Degradation

A look at how capital ensures that there is division and internal conflict of labour within and between national borders, and that labour competes with automated systems in terms of profitability page 92

Crime-fighting Strategy

An outline of problems with the currently available repository of crime data, and suggestions for conducting a nationally representative crime victimisation survey to meet the goal of eradicating sexual violence page 23

Healthier or Just Long-lived?

An analysis based on a nationwide panel survey during 2005–12 shows a marked surge in the burden of disability and its different types and their severity among the elderly. page 83

Harvest of Uteruses

10 Women workers face multiple reproductive health problems due to the back-breaking work and poor sanitation and hygiene conditions in Maharashtra's sugar belt, where private healthcare facilities provide unnecessary and extreme treatments, including the removal of their wombs. — *Abhay Shukla, Seema Kulkarni*

Universal Basic Cash

14 A critique of the notion of universal basic income is presented, using a basic microeconomic model, while the consequences of the monetary authority's golden rule of consumption for work, saving and investment are ambiguous, and the price level is indeterminate. — *Romar Correa*

Why India Needs a Crime Victimization Survey

23 To be effective, policies on sexual violence against women must be evidence-based, for which a national crime victimisation survey supplementing the National Crime Records Bureau could be used for further research. — *Nithya Nagarathinam*

Debating the 'After' of Subaltern Studies

27 The exchanges between Partha Chatterjee and Dipesh Chakrabarty of the erstwhile Subaltern Studies group on its relevance in contemporary times signify a conflicting understanding of how the "after" of Subaltern Studies is to be conceived. — *Ngoru Nixon*

Has Disability Risen among the Elderly in India?

83 An analysis of disability among the elderly and its covariates during 2005–12 is provided using data from two rounds of the nationally representative India Human Development Survey, conducted in 2005 and 2012. — *Veena S Kulkarni, Vani S Kulkarni & Raghav Gaiha*

Degraded Labour, Automation and Information Technology

92 The idea that skill degradation is one of the means by which capital ensures there is continued division and internal conflict of labour as well as labour competition with automated systems is explored through the lens of Harry Braverman's seminal work. — *Jamshed Sheriyarji*

Innovations in Public Administration in India

100 The state of innovation in public service and administration in India is analysed through the Prime Minister's Awards for Excellence in Public Administration for the period 2005–06 to 2016–17, indicating some degree of direction in good governance and replicability. — *Dipti Gupta, Ashok Kumar Pandey & Amit Garg*

The Bru–Mizo Conflict: A Rejoinder

111 This rejoinder to Shyamal Bikash Chakma and Suraj Gogoi's article, "The Bru–Mizo Conflict in Mizoram" (*EPW*, 3 November 2018) questions their treatment of the question over historical depth, as well as the inaccurate and incomplete representation of facts and silencing of the "victim" voice. — *Roluahpuia*

Postscript

117 *Shruti Sonal* on the continuing relevance of Chimamanda Ngozi Adichie's *Half of a Yellow Sun*; *Sujit Kumar Mishra* on the depiction of community-level adaptation to drought in *Sala Budha*; and Last Lines by *Ponnappa*.

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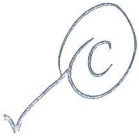
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An Ill-advised Policy

The draft National Education Policy, 2019 will bring greater external interference in all aspects of the functioning of educational institutions, undermining its stated goal of providing autonomy to them. page 28

Too Much of a Good Thing

The government appears to have misjudged the impact of its macroeconomic policies and has omitted the expansion of public investment. page 33

Evidence of Segregation

Using enumeration block-level census data from 2011 for five major cities, how patterns of caste-based urban residential segregation operate in India is examined. page 64

Indian Migrants Abroad

An assessment of the institutional framework of emigration in India and how the 2019 draft bill aims to manage the world's largest emigrant population page 19

The Big Cats of Sariska

The string of tiger deaths in the Sariska Tiger Reserve points to the need for attending to the chronic problems around protected area management in India. page 15

The True Dangers of the RTI (Amendment) Bill

10 The Right to Information Act, 2005 has caused controversy around the Central Information Commission being weakened, arising not purely because of the text of the law, but the absence of proper justification for the amendments. — *Alok Prasanna Kumar*

Fourth Industrial Revolution

12 The technology-driven revolution is fundamentally affecting the relationship between capital and labour, driving right-wing populism across the globe, while the left has remained a laggard. — *Atul Bhardwaj*

Challenges for Protected Area Management in Sariska

15 Both the immediate and long-term causes of tiger mortality in Sariska, particularly in the context of the larger challenges surrounding protected area management in India, are explored. — *Ghazala Shahabuddin*

Draft Emigration Bill, 2019: The Missing Links

19 For the draft Emigration Bill, 2019 to be truly effective, it needs a rights-based approach inclusive of all Indian migrants abroad. — *S Irudaya Rajan, Varun Aggarwal & Priyansha Singh*

An Academic's Response: Draft National Education Policy, 2019

28 The acceptance of the draft National Education Policy in its current form may prove disastrous with the increased political control over and undermining of the autonomy of educational institutions. — *Rowena Robinson*

Unmoved by Stability: Capital Formation in the Modi Economy

33 The Narendra Modi government actively pursued macroeconomic stability and a business-friendly regulatory framework, but the investment rate of the economy has actually slid. — *Pulapre Balakrishnan*

Elementary Education in 19th-century Bengal

37 In order to analyse the educational policy of 19th-century Bengal, the changing notions of British imperialism and the educational development of contemporary Britain should be studied and evaluated critically. — *Sweta Dey*

Achieving Universal Health Coverage in India

45 A practical framework is presented to determine an essential health package, considering coverage and equity perspectives for service delivery, financial protection and morbidity burden in the population. — *Shankar Prinja, Atul Sharma, Indrani Gupta, Samik Chowdhury & Mayur Trivedi*

China's Higher Education System

55 The operation of the contrary forces of diffusion and control in China's higher education system is critically examined, highlighting the distinctiveness of China's internationalisation of higher education. — *Romi Jain*

Neighbourhood-scale Residential Segregation

64 Using enumeration block-level census data from 2011 for five major cities in India—Bengaluru, Chennai, Delhi, Kolkata, and Mumbai—it is shown how patterns of caste-based urban residential segregation operate in contemporary India. — *Naveen Bharathi, Deepak Malghan & Andaleeb Rahman*

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Fiscal Transfers to States

Analyses of the design and implementation aspects of general and specific purpose transfers underline the importance of intergovernmental transfers, especially for welfare schemes in low-income states. page 52

Labour Market of Kerala

A micro-level study explains the wage decomposition factors related to the wage gap between immigrant and local labourers in the construction sector of Kerala. page 35

Maternal Healthcare in Bihar

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Gandhi and Non-violence

Two reviews assess books on Gandhi and philosophy and the philosophical understanding of violence and non-violence across time and history. pages 26, 28

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Five articles examine the results of the Lok Sabha elections in Uttar Pradesh, Rajasthan, Tamil Nadu, West Bengal and Karnataka. page 10 onwards

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BJP's Southern Comfort: Success in Karnataka

10 Caste calculus and ground-level chemistry had an adverse impact on the Congress-Janata Dal (Secular) alliance and led to the Bharatiya Janata Party recording its best ever victory in Karnataka. — *Sandeep Shastri, Veena Devi*

Moving towards Single-party Dominance in Rajasthan

13 The recent sweep by the Bharatiya Janata Party in the Lok Sabha elections from Rajasthan is located in the wider context of the electoral politics of the state. — *Sanjay Lodha, Nidhi Jain*

A New Trajectory of Politics in West Bengal

16 The National Election Study 2019 data is used to explain the rise of the Bharatiya Janata Party in West Bengal and the eclipse of the Congress and the Left Front. — *Jyotiprasad Chatterjee, Suprio Basu*

Failure of the Mahagathbandhan

21 In the 2019 Lok Sabha elections in Uttar Pradesh, the Samajwadi Party, Bahujan Samaj Party and Rashtriya Lok Dal's alliance took on the challenge against the domination of the Bharatiya Janata Party. — *Mirza Asmer Beg, Shashikant Pandey & Sudhir Khare*

Reinforcing Dravidian Identity Politics in Tamil Nadu

24 The Lok Sabha election results in some ways indicate the reassertion of Dravidian identities and the key role of the Dravidian parties in the politics of Tamil Nadu. — *P Ramajayam*

Community-led, Heritage-linked Development

31 While the Andhra Pradesh government's efforts to build a new capital city, Amaravati, is in national focus, a government scheme to preserve a nearby village's heritage is floundering. — *Anubhav Pradhan*

Wage Differences between the Inmigrant and Local Labourers

35 The wage determinants of inmigrant and local labourers in Kerala's construction sector exhibit varied intensity in influencing their wage and wage gap, necessitating a revisit of labour laws and wage policies. — *K C Baiju, Shamna T C*

Utilisation of Maternal Healthcare Services in Bihar

44 Based on National Sample Survey Office data, the impact of the National Health Mission on improving utilisation of maternal healthcare services in Bihar is critically evaluated. — *Saswata Ghosh, Zakir Husain*

Redesigning the Fiscal Transfer System in India

52 With an overwhelming proportion of the poor living in low-income states, the provision of comparable levels of basic social services and physical infrastructure is important to ensure balance and stability in the Indian federation. — *M Govinda Rao*

What Eventually Emerged from the Emergency?

61 The reviewer of Gyan Prakash's book *Emergency Chronicles: Indira Gandhi and Democracy's Turning Point* replies to the author's disagreements with his review ("A Road Map of Change in Democracy," *EPW*, 22 June 2019). — *Arvind Rajagopal*

Reading and Misreading Marx: A Review of a Review

64 A response to "The Other Marx" (Murzban Jal, *EPW*, 26 January 2019), a review of the book *Marx at the Margins: On Nationalism, Ethnicity, and Non-Western Societies* (2010) by Kevin Anderson — *Aakanksha Baruah, Sheena Jain*

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69 *Shashi Kumar* on Girish Karnad as the insider-outsider in the literary world of Kannada; *M S Prabhakara* remembers his intermittent interactions with Girish Karnad over the years; *Rebecca Gonsalvez* on the travails of commuting in Mumbai; and Last Lines by *Ponnappa*.

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India needs to develop a vast data repository and tools capable of going to the most granular level in order to support follow-up actions on policy. page 44

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The draft National Education Policy, 2019 fails to understand the nature of the humanities and the needs of most students studying in this stream. page 10

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An analysis of vertical transfers suggests a number of ways for the government to provide more incentives for increasing the low level of tax collection by panchayats. page 68

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A Blinkered View of Humanities Education?

10 The promotion of a liberal arts curriculum by the draft National Education Policy, 2019 needs clarity on how humanities education differs from science education. — *Sundar Sarukkai*

A Rate Cut That Failed to Please

13 The United States Federal Reserve decision to cut short its cycle of interest rate increases and reduce rates is likely to restore an environment of excess and cheap liquidity. — *C P Chandrasekhar*

Mumbai's Dilapidated Buildings

15 The situation of "dilapidated buildings" in Mumbai is examined in the context of every monsoon season bringing news of buildings collapsing in the city. — *Chandrashekhar Khandekar*

Goa 2019 Verdict: Sway of Regional Factors

19 Unlike in 2014, the outcome of the 2019 polls was significantly influenced by regional considerations. — *Alaknanda Shringare*

Elections in Andhra Pradesh: Voter Preference for YSRCP

21 The Yuvajana Sramika Rythu Congress Party's victory can be attributed to the *padayatra*, consistency in the stand for special category status, promise to implement welfare schemes, and its effective campaign. — *E Venkatesu*

BJP's Sweeping Electoral Victory in Haryana

24 The 2019 Lok Sabha elections in Haryana rendered dynastic politics ineffective, and the Bharatiya Janata Party was accepted across socio-demographic indicators. — *Kushal Pal, Jyoti Mishra*

What Swayed the Delhi Voters towards BJP?

27 The Bharatiya Janata Party was able to win all seats in Delhi due to Delhi voters' gravitation towards it in Lok Sabha polls and the satisfaction with its governance at the centre among all segments of society. — *Biswajit Mohanty*

BJP Replaces the Congress in Maharashtra

29 The political dominance of the Bharatiya Janata Party is deciphered and the prospects of the state politics in the context of the upcoming state assembly elections in Maharashtra are analysed. — *Rajeshwari Deshpande, Nitin Birmal*

Food Subsidy in Cash or Kind? The Wrong Debate

39 Only a well-designed empirical test of the alternative modes of subsidy will help ascertain the preferred shape of the public distribution system for a particular state or district. — *Anirudh Krishna, Tushar Agrawal*

In Quest of Inclusive Growth

44 The feasibility of a new multidisciplinary framework for organising economic data in the quest of a paradigm inclusive growth is explored. — *R B Barman*

Groundwater, Gurus, and Governmentality

51 The state-international bodies-MNC-religion complex has regimented a large population in an all-pervasive governmentality. — *Srirupa Bhattacharya*

From Mobile Access to Use: Feature-level Digital Divides

60 The use of mobile phones is examined using micro-level data to highlight how the socio-demographic characteristics influence engagement with the various features of mobile phones. — *Jang Bahadur Singh, M Vimalkumar*

Fiscal Grants and Tax Effort of Panchayats

68 The impact of restricted and unrestricted fiscal grants on tax effort of panchayats is examined using nationally representative panel data on finances. — *Raghbendra Jha, Hari K Nagarajan & Anirudh Tagat*

Reading Electoral Outcomes through the Optic of Caste

76 A response to "Caste and Electoral Outcomes: Misreading Hierarchy and the Illusion of Numbers" by Dipankar Gupta (*EPW*, 22 June 2019) — *Vishesh Pratap Gurjar*

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Seven articles critically assess the vision for the economy's growth, in general, and the proposals with respect to macroeconomic and fiscal management, development of agriculture and manufacturing, and allocations for social sector and employment generation, in particular.

Is this budget a missed opportunity for creating a "virtuous" cycle of investment, productivity growth, and jobs? pages 24-46

What Is Paramount for Policy?

If policies are pursued to facilitate business activity, and better methods are used to measure it, India can raise its per capita gross domestic product. page 51

Emerging Census Towns

A micro-level look at opportunities and challenges thrown up by new census towns due to the shift of the working population from the farm to the non-farm sector page 122

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Articles based on post-poll surveys look at results in Punjab, Odisha, Telangana, Bihar and Jharkhand. page 10 onwards

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An Outlier in the North

10 The most significant development of the 2019 Lok Sabha elections in Punjab was the victory of the Congress, making the state an outlier in almost all of India, except for Kerala. — *Jagrup Singh Sekhon, Ashutosh Kumar*

Welfarism versus Hindutva

13 The 2019 elections in Odisha present a unique case where Narendra Modi becomes the most acceptable face as Prime Minister, but the Biju Janata Dal gets an upper hand in vote shares and seats. — *Hilal Ahmed, Gyanranjan Swain*

Parliamentary Elections in Telangana

16 An assessment of the first Lok Sabha election results after the formal creation of Telangana — *H Vageshan, Ramya Chitrapu*

NDA's Big Victory in Bihar

18 The National Democratic Alliance registered its best ever performance in Bihar in the Lok Sabha elections 2019. — *Mohammad Sanjeer Alam, Rakesh Ranjan*

BJP's Aggressive Campaign in Jharkhand

21 The success of the Bharatiya Janata Party in Jharkhand was enabled by the popularity of its prime ministerial candidate and being perceived as the saviour of the nation. — *Harishwar Dayal*

Can India Raise Its GDP Per Capita to \$5,000 by 2030?

51 If policies are pursued to facilitate business activity, and better methods are used to measure it, India can raise its gross domestic product per capita to \$5,000 by 2030 (from \$1,965 in 2017). — *Jayanta Kumar Mallik*

Census Towns in Uttar Pradesh

122 Census towns in selected districts of Uttar Pradesh have been analysed to comprehend the trends and patterns of urbanisation resulting from the transformation of rural areas into urban settlements. — *Prem Kumar*

Budget 2019-20

A set of seven articles provides a critical commentary on the budget proposals and vision for the economy's growth.

Road Map for Structural Reforms

24 There were great expectations of fast-tracking reforms in the budget, but it disappoints in setting a road map. — *M Govinda Rao*

Betting on Animal Spirits

27 Budget 2019-20 is more concerned with getting private finance for investment, rather than with financing much needed state action to address slowing growth and welfare shortfalls. — *C P Chandrasekhar*

Much Ado About Nothing

30 The announcements for the financial sector are either too little or too grandiose, relative to the actual requirements of the sector. — *Partha Ray*

Putting the Cart before the Horse

33 The 2019 Union Budget has neither proposed any bold policy moves, nor any big allocations for investments in the agri-food sector. — *Ashok Gulati*

Vision for Industrial Growth

36 The budget's vision for the growth of the manufacturing sector has been clouded by some illusions. — *M Suresh Babu*

Growth, Employment and Labour

40 Despite the rhetoric in the budget speech of the finance minister, the larger picture emerging from the recent data is a slowdown in growth and a net decline in employment. — *K P Kannan*

Social Sector in the 2019 Union Budget

43 The 2019 Union Budget has touched on all the components of the social sector in bits and pieces, but the overall framework for the sector is not clear. — *S Mahendra Dev*

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133 *Ananya* reads social protest in *Kaala* with *Towards an Aesthetics of Dalit Literature*; *Michelle D'costa* on finding characters in fiction she can relate to; *Gope Ahuja* on the Sindhis' access to the Kartarpur Sahib corridor; and Last Lines by *Ponnappa*.

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Five articles assess the impact of existing technologies, and imagine the futures with and of various technological trajectories within the frame of statist politics and mainstream science and technology, even as they unfold as accounts about the here and now and the reality of this sphere, of society and the nation. page 39 onwards

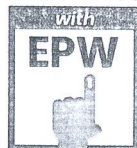
Mumbai's Unbearable Load

Will a focus on non-motorised transport rather than on merely building more passenger capacity ease the congestion in the city's suburban trains? page 34

Everything Changes

The Yellow Vest movement in France has been criticised by many on the left and by parts of the media, but like many other such movements, it can be transformational. page 12

Elections



Articles based on post-poll surveys look at results in Kerala, Madhya Pradesh and the North East, including Assam. page 16 onwards

Code on Wages and the Gig Economy

10 The Code on Wages, 2019 is a missed opportunity to update the definition of "employee" in the context of the rise of the "gig economy."
— *Alok Prasanna Kumar*

Climate Change and the Yellow Vest Movement

12 When many parts of the world seem to be on the right-wing populist trajectory, any organised or deliberately non-organised movement can set off changes and effects in different and unexpected ways. — *Zaheer Baber*

Decisive Vote for UDF in Kerala

16 The anti-incumbency wave against the National Democratic Alliance government at the centre and the Left Democratic Front government's hasty decision to implement the Sabarimala verdict influenced the election outcome in Kerala. — *K M Sajad Ibrahim*

Electoral Response to the Citizenship (Amendment) Bill

19 An examination of survey data is undertaken to understand why the Citizenship (Amendment) Bill issue did not affect the poll fortunes of the Bharatiya Janata Party in the North East. — *Amongla Jamir, R K Satapathy, S Mangi Singh & Shreyas Sardesai*

Assam 2019: NDA Deepens Its Dominance

23 The 2019 elections were seen as a litmus test for the Bharatiya Janata Party in terms of retaining its base among the state's indigenous communities that were bitterly opposed to the Citizenship (Amendment) Bill.
— *Dhruba Pratim Sharma, Vikas Tripathi*

Explaining the BJP's Comprehensive Victory in MP

26 The 2019 Lok Sabha elections in Madhya Pradesh took place against the backdrop of the assembly elections of 2018, wherein the Bharatiya Janata Party put up an extraordinary performance. — *Yatindra Singh Sisodia*

Easing Mumbai's Suburban Train Congestion

34 An integrated approach is suggested, wherein non-motorised transport infrastructure can take the load off Mumbai's suburban system by weaning short-distance travellers away from it. — *Vineet Abhishek*

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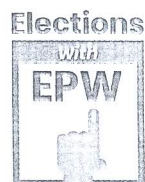
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44 The Barber-Johnson technique is used to analyse the efficiency of five hospitals of India's apex medical institute, revealing a high efficiency of those hospitals, but also a high probability of poor health outcomes in future. — *Laxmitej Wundavalli, Sidhartha Satpathy & D K Sharma*

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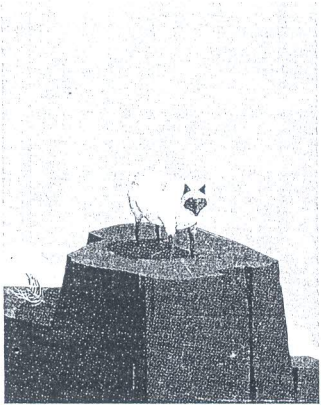
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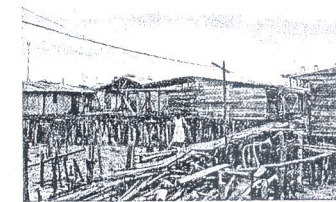
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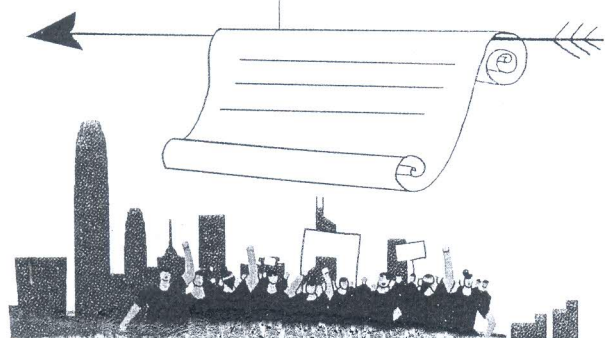
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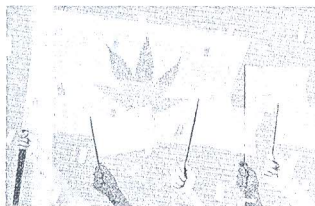
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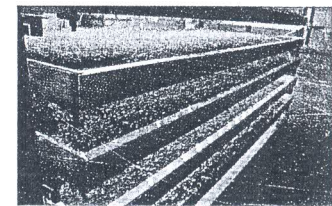
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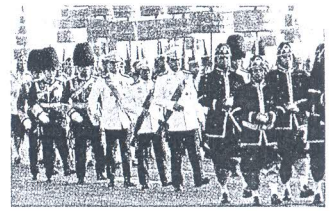
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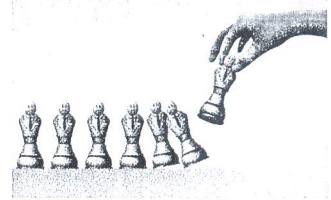
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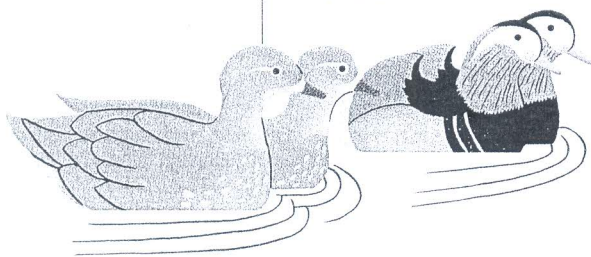


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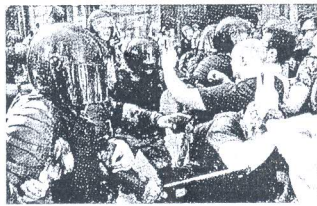


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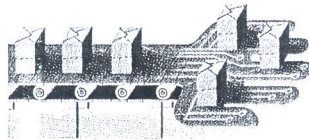
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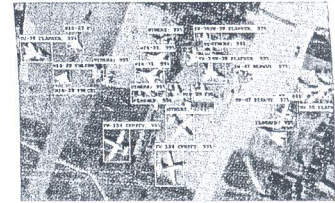
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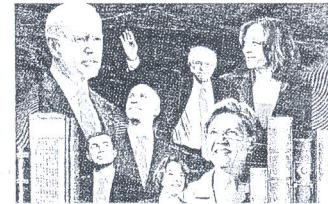
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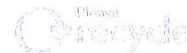
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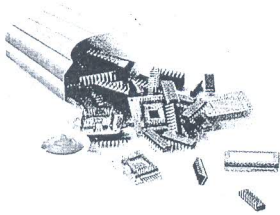
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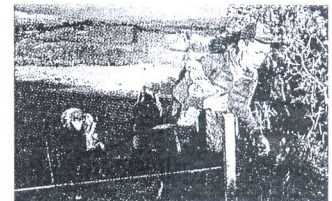
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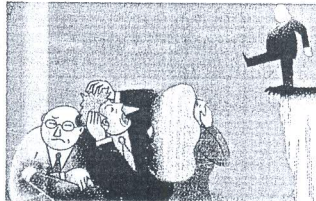
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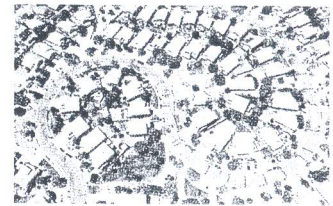
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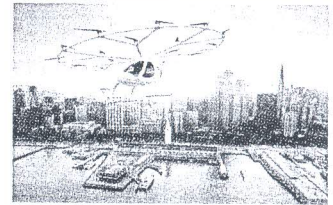
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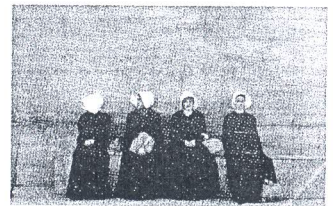
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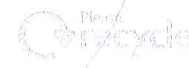
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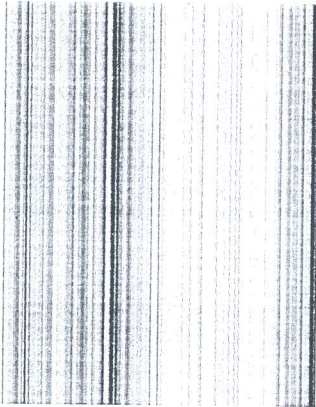
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On the cover

Global warming touches on everything *The Economist* writes about. In this issue we feature a series of articles that look at climate change and how to cope with it. The stripes on our cover were developed by Ed Hawkins of the University of Reading. They represent the years from 1850 to 2018 and the colour marks each year's temperature, compared with the average in 1971-2000

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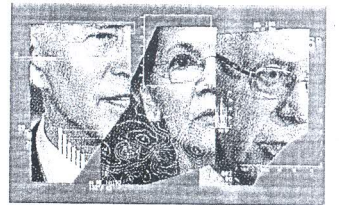
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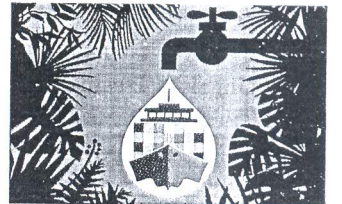
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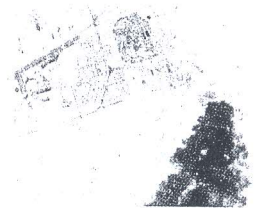
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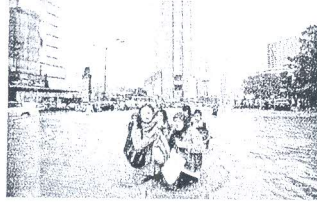


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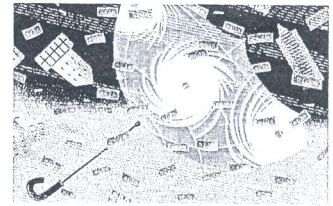
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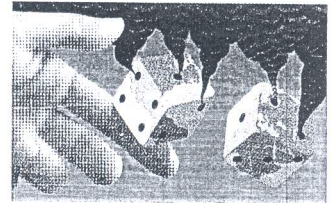
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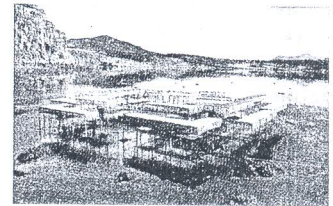
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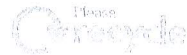
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EDUCATIONAL ACTION RESEARCH

Vol. 27 No. 1
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Special Issue Title: Knowledge Democracy
Special Issue Editors: Lonnie Rowell and Allan Feldman

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Educational Psychologist

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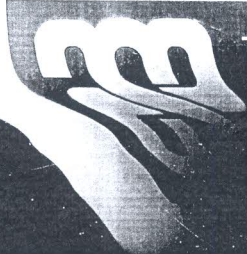
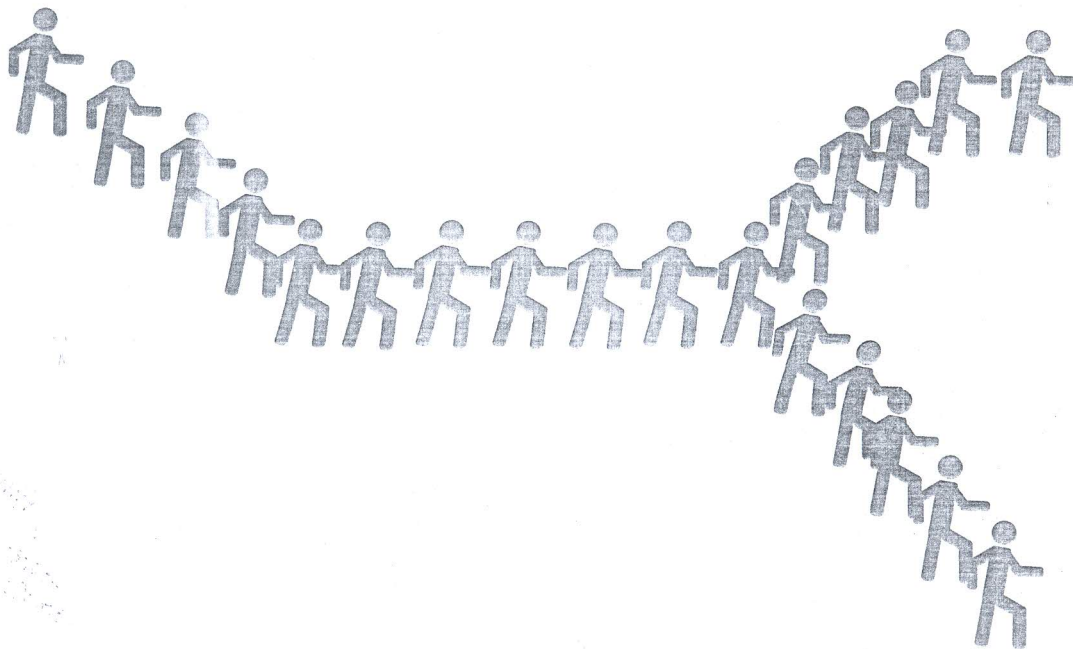
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Science Teacher & Technician Retention and Recruitment

Will our current approach resolve the crisis? EXIT

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The Association
for Science Education

Excellence in Science Teaching and Learning

Editorial

Welcome to February *EiS*.

In this issue, our main feature is on teacher recruitment and retention.

The issue is affecting most of the UK, especially in science and maths.

In January, the Department for Education in England (DfE) produced its *Teacher Recruitment and Retention Strategy*. The report is general and understandably does not deal in depth with the full context of science teachers.

Reading it prompted me to write an article about the need to identify the specific factors, particularly technician support, that affect science teachers compared to teachers in general (see page 8). My article is written to promote further discussion and contains my own personal views.

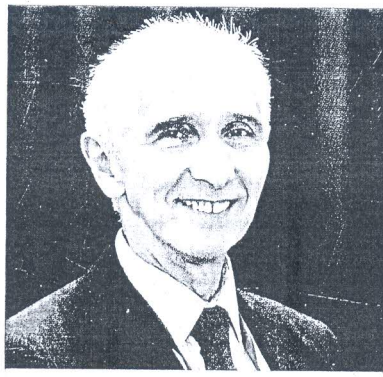
There are further articles on this feature, including an update on ASE's Science Teacher SOS campaign, which was successfully launched last year to offer impartial, non-judgemental advice to teachers thinking of leaving the profession. The DfE is interested in seeing how they can work with us on this.

We also feature some highlights from our 2019 Annual Conference held at the University of Birmingham in early January. We are proud to host Europe's largest science education conference. This year there were 473 speakers delivering 504 sessions. There was an increase, compared with our two previous annual conferences, in our delegate numbers and the total number of delegate days. My thanks go to the conference team of volunteers, staff and stewards for their support before and during an outstanding four days.

We are delighted that Professor Sir John Holman became the new ASE President in January. ASE has been fortunate to have had some very distinguished people from educational research, from industry and from science, in the position of President. What makes John's presidency extremely special, on top of his record of outstanding contributions to science teaching and learning, is the fact that he has been an ASE member for over 40 years and a key contributor to many ASE projects. John's Presidential Address, *Why science teachers matter – their role in underpinning an innovative economy and improving social equity was warmly received in Birmingham* (see page 7).

This is the third edition of our new format of *EiS*, and our second new A4 format of *SSR* was recently circulated to relevant members. We are interested to receive feedback on these new formats. An online journals survey will be launched from mid-February – for those who prefer a paper version, you will find one printed on pages 33-34 of this issue.

Finally, I would like to wish you all a successful 2019!



Sir John Holman
President
The Association for Science Education

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Careers in Science

How do we approach careers opportunities in STEM subjects?

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06/9/19

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pathologist
electrician
nurse
teacher
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SCIENCE



The **Association**
for **Science Education**

Promoting Excellence in Science Teaching and Learning

Editorial

Welcome to the May *Education in Science* (EIS).

A teacher wears a variety of hats – there's a lot more to teaching than just showing up and giving the day's lessons! Much of what young people learn from their teachers is not detailed on a syllabus. As a primary teacher, you probably see the same group of pupils five days a week; as an 11-19 teacher it may be as much as 5 hours per week.

You are therefore one of the most influential people in a young person's life. You might influence them to discover a new sport, hobby, talent, or possibly, through you they may be nudged down a particular career pathway. Do you try to communicate the wealth of careers that are STEM related? If not, is this partly ignorance, or is it a belief that learning about science is its own reward?

I believe that the best teachers are happy to extend their role beyond the science syllabus because they know that it makes their students' educational experience so much more beneficial. Our main feature in this edition is about careers. We open with an article by our President, Sir John Holman, and his involvement with the introduction of the government's Careers Strategy in England. This is followed by articles on careers in primary schools and in secondary/college settings, as well as how one teacher spent two weeks of her summer vacation gaining an insight into STEM careers. Providing an awareness of careers opportunities helps young people to appreciate the wide range of avenues available in an ever-changing world, as well as raise their aspirations, address gender bias and hopefully improve social mobility for those students living in disadvantaged circumstances.

Also in this edition is an article by Janice Griffiths, our Chair-Elect, on the numerous benefits of ASE membership and how to make the most of your membership; she provides an interesting 'iceberg' analogy. Rob Butler, ASE Field Officer, explains how his role initially as a volunteer improved his teaching and led to further career and social opportunities.

It doesn't seem long since we were packing up after a very successful 2019 Annual Conference in Birmingham. We are now well on the way with preparations for 2020 to be held at the University of Reading so, if you are interested in attending or presenting, then please look at page 8 for further details. Before then we have a range of events and other exciting conferences, including what is always a very high quality event, our ASE Futures Conference. This year it will be at Sheffield Hallam University on the 4th and 5th July.

Finally, as this is the last issue of this academic year, I would like to wish you all a restful and enjoyable summer.



Sir John Holman
President of the Association for Science Education

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THEMATIC SECTION: BRINGING SPECIES AND ECOSYSTEMS TOGETHER WITH REMOTE SENSING TOOLS TO DEVELOP NEW BIODIVERSITY METRICS AND INDICATORS

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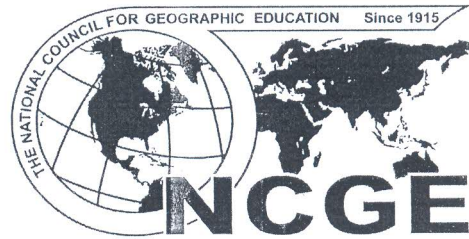
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IMPRESSIONS, EXPRESSIONS

We are living in an age of extremes. The post WWII politics slipping into Cold War, then at the end of it, the notion of a unipolar world undermined soon enough by its own Frankensteins like globalization, and a liberalized world dominated by market economy controlled by organizations like the WTO bringing about a backlash ending in protectionism and rank xenophobia, marked the beginning of a malaise. Pro-democracy uprisings in the Middle-East and Maghreb degenerating into protracted civil wars churning out massive exoduses of refugees from these parts and other Asian and African hotspots mainly into Europe created the huge immigrants' problem that brought about revolutionary changes in the demographics and the socio-cultural maps of many prominent Western nations. An extreme swing to the right wing observed the world over in leadership and governance seems to indicate that people aspire to have strongmen at the helm with a firm grip, when sea-changes of such magnitude occur and nothing seems to be stable any more. All these collectively have been rocking the boat of the common man's life for most of this fast-closing decade. The literature that's coming out from different parts of the world now seems to reflect exactly this mood.

Climate change is on the tips of everyone's tongue. Literature around it is burgeoning. Amitav Ghosh's non-fiction, *The Great Derangement* (2016) and almost its fictional sequel *The Gun Island* (2019) dwell on the doomsday-like scenario of severe environmental derangement. Gabriel Garcia Marquez's latest book (brought out posthumously in 2019) *The Scandal of the Century*, made up of editorials, op-eds, profiles and features culled from his journalistic archives, mention the story of a drunken man who jumped out of his third-floor window, dazed by the sight of fish falling from the sky; a few weeks ago, there was such a news-report—about fish raining from the sky in Mumbai. A similar scene is there in *Gun Island* too, as a result of an untimely tornado triggered by extreme climate change. We are living through magic realistic times.

Amid such palpable chaos, it is but natural that writers look for a structure of unity in the scattered state. David Christian, the creator of the Big History Project, in his book *Origin Story: A Big History of Everything* (2019) argues that it is the myriad creation myths or cosmologies belonging to

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About the Artist: My name is **Bella Pasquinelli** and I have been interested in making art for as long as I can remember. When I was younger I loved to draw ponies, flowers, and dogs. I still love to draw those things, and I now found a love for drawing fantasy creatures and creating designs. My art teacher has told me that I have a lot of talent and a great use of color. That makes me very happy.

The artwork on the cover ("Facets") was made while my art class studied the artist Chuck Close. He inspired me in many ways because he talked about how art saved his life. Chuck Close had learning disabilities and school was hard for him, and I can relate. He created portraits that were very large and to get them done he broke them down into small steps. I loved that idea and when I created this artwork I did the same thing. I think art class is most definitely my favorite class and it just helps me. I think all schools should have art classes.

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New Delhi

May 11, 2019

Murkier Poll Campaign, Frightening Prospects

JOSEPH ABRAHAM

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UP Elections

FROM N.C.'S WRITINGS

JUDICIAL ACTIVISM, RIGHT OR WRONG

Murkier Poll Campaign, Frightening Prospects

As the parliamentary elections for the 17th Lok Sabha are drawing to a close within a few days, the election campaign is becoming increasingly murkier.

One has just returned from a fleeting visit to Lucknow but even in the short span of one's stay in UP one was able to clearly discern the public urge for a change from the BJP dominating the State to the SP-BSP *mahagathbandhan*; and experienced observers of the electoral scene disclosed that the BJP would suffer considerable reverses in the State. Yet only yesterday the PM asserted that he was reasonably certain of the BJP improving upon its 2014 tally (when it won on its own 73 of the State's 80 seats). The extraordinary overconfidence that Modi exuded while speaking to select sections of the media before the BJP rally in the Capital last evening was doubtless striking to say the least; but eventually it

turned out to be nothing more than bluster on his part.

However, what is also true is that the lengths to which the PM is going to assail a deceased PM (Rajiv Gandhi) on how he spent his vacation in December 1987 at INS Viraat, the country's premier warship, in order to paint him as the "most corrupt PM number one" who used the Viraat as a "personal taxi" have caused consternation in several circles including the Naval community. The former Chief of Naval Staff, Admiral L. Ramdas (retired), unequivocally refuted the allegation that Rajiv used the warship for a personal cruise.

The question is: why is Modi doing so? The answer is that this too is a sign of desperation on his part. That may well be the case; but is he not able to comprehend that in the process he is bringing down the stature of the PM before the nation and the world? This is a serious matter calling for self-introspection by the BJP leadership.

Meanwhile two incidents in the East Delhi constituency of the Capital have attracted attention. The discovery of the carcasses of two cows in the area has evoked anxiety over the possibility of a fresh outbreak of communal violence. At the same time the circulation of a leaflet against the AAP candidate there, Atishi, has culminated in the AAP and BJP trading charges against each other. The leaflet apparently carried certain disparaging innuendos against Atishi and the AAP attributed the publication to Atishi's BJP rival, cricket star Gautam Gambhir, who not only strongly rejected the allegation but also threatened to quit everything including politics in the backdrop of the accusation. Such incidents reveal the extent to which politics has sunk in the attempt to win the polls. This indeed reflects the gutter-level discourse currently prevailing in the country.

Meanwhile the remaining phases of elections in West Bengal, which already witnessed some measure of violence, could lead to more bloodshed. But from available indications it appears that the BJP would not be able to make up its losses in UP through its anticipated gains in West Bengal.

Nevertheless, the issue of manipulation of the EVMs cannot be overlooked. Large numbers of EVMs have already been found to be missing. Herein lies the problem. Due to the do or die battle on both sides this problem has assumed a frightening dimension of late.

May 9

S.C.

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'We can't turn Hindustan into Lynchistan'

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'We can't turn Hindustan into Lynchistan'

In the midst of the intense gloom that has engulfed secular democrats of all hues of late following the return to power for the next five years of the present-day BJP run by the Narendra Modi-Amit Shah duo, the parliamentary proceedings in the Budget session were enlivened by a few memorable speeches from the Opposition benches. One of them was that of Mohua Moitra, a newly-elected Trinamul Congress MP from the Krishnanagar Lok Sabha constituency of West Bengal. While underscoring a "ten-fold increase in the number of hate crimes between 2014 and 2019" she added: "The lynching of citizens in broad daylight is being condoned. From Pehlu Khan

in Rajasthan last year to Tabrez Ansari in Jharkhand yesterday (June 24, 2019) the list is not stopping."

Significantly in his customary reply to the discussion on the President's address to Parliament, PM Narendra Modi was compelled to speak out on the Jharkhand lynching incident. While asserting that all such violence, whether in Jharkhand, West Bengal or Kerala, must invite uniform condemnation, he said: "The incident (Jharkhand lynching) has pained all of us, including myself. The culprits must get the strictest punishment." However, such statements have no value if words are not followed up by deeds. As far as Modi is concerned, his earlier pronouncements on similar incidents did not carry weight as those turned out to be nothing short of lip-service.

However, the lynching of Tabrez Ansari has been widely denounced by all sections, both Muslims and non-Muslims, in Parliament and outside. Lok Sabha experienced uproarious scenes on the issue yesterday. Raising the matter during zero hour, Trinamul Congress leader Saugata Roy called it a blot on humanity and demanded that the BJP should look into the affairs of the States ruled by it. In his words: "BJP members are speaking about West Bengal but not taking steps on what is happening in Jharkhand and other places. This is an example of religious intolerance and TMC will continue to protest against mob lynching." He further told the Lower House that it was a clear case of "cold-blooded murder" since Tabrez, who had sustained severe head injuries, was kept in custody for four days (obviously without getting medical treatment).

Not only Saugata, several Muslim MPs, Azam Khan, Barrister Asaduddin Owaisi, Shafiqur Rahman Barq joined him in demanding justice for Tabrez.

Outside Parliament too there have been largescale protests by several organisations including the Social Democratic Party of India as well as United Against Hate. Such protests took place in the Capital's Jantar Mantar and Jharkhand State Bhavan. Demonstrators carried placards declaring: "We can't turn Hindustan into Lynchistan".

The public protests on this issue are a clear manifestation of the people's growing anger at the way the BJP is functioning following its massive victory at the hustings this year.

To ignore such mass opposition to the BJP's manner of operation would be disastrous for the country's ruling party in the days ahead.

June 27

S.C.

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Mainstream

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2019/11/19

VOL LVII No 29

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July 6, 2019

Essence of Rahul's Ideological Assertion

ARUN KUMAR

Economic Survey 2018-19:

Prescriptions do not follow the Analysis

S.G. VOMBATKERE

The Economic Growth-Climate Change Conundrum

MUSTAFA KHAN

Lynching is the Game-changer in New India

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MIG: At the Centre of the Narrative of Elections

BARUN DAS GUPTA

Mamata's Worry is not BJP, but her Own Party

GARGI CHAKRAVARTTY

A Tribute to Primla Loomba

FROM N.C.'S WRITINGS

SUN SETS ON THE BRITISH EMPIRE

Essence of Rahul's Ideological Assertion

In the wake of several developments at the national level, doubtless the most significant event of late has been the decision of Congress President Rahul Gandhi to step down from his post as the head of the grand old party. In a detailed letter to the party workers yesterday he has slammed the lid on any speculation that he might be persuaded to reconsider the decision to this effect he took soon after the 2019 parliamentary election results were declared giving the ruling party at the Centre a massive mandate to govern the country for the next five years.

The letter began with the words: "It is an honour for me to serve the Congress Party, whose values and ideals have served as the lifeblood of our beautiful nation", adding: "I owe the country and my organisation a debt of tremendous gratitude and love."

Thereafter in two operative paragraphs he explained his position in depth:

As President of the Congress Party, I am responsible for the loss of the 2019 election. Accountability is critical for the future growth of our party. It is for this reason that I have resigned as Congress President. Rebuilding the party requires hard decisions and numerous people will have to be made accountable for the failure of 2019. It would be unjust to hold others accountable but ignore my own responsibility as President of the party.

While making it transparent that he would not nominate anyone to replace him, he categorically pointed out that "it would not be correct for me to select that person" underscoring the fact that "ours is a party with a profound history and heritage, one of struggle and dignity that I deeply respect" as "it is woven into the fabric of India" before stressing that he was confident the Congress "will make the best decision regarding who can lead us with courage, love and fidelity".

The letter was valuable also because, as he elucidated, "my fight has never been a simple battle for political power" and "I have no hatred or anger towards the BJP" even though "every living cell in my body instinctively resists their idea of India". Thereafter he underscored:

This is not a new battle; it has been waged on our soil for thousands of years. Where they see differences, I see similarity. Where they see hatred, I see love. What they fear, I embrace.

Then he insisted:

This compassionate idea permeates the hearts of millions and millions of my beloved fellow citizens. It is this idea of India that we will now vehemently defend.

He further asserted:

The attack on our country and our cherished Constitution that is taking place is designed to destroy the fabric of our nation. In no way, shape or form am I stepping back from this fight. I am a loyal soldier of the Congress Party and a devoted son of India and will continue to serve and protect her till my last breath.

This is how he revealed his innate Nehruvian spirit which continues to inspire millions of our countrymen tearing the mist of misinformation and calumny.

As for the elections, he emphasised the strong

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July 20, 2019

Nitish on the Horns of a Dilemma

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RAM PUNIYANI

Tabrez Ansari, 'Jai Shri Ram' and Hate Killings

SURANJITA RAY

Budget: A Catalyst for Social and
Economic Transformation

M.K. BHADRAKUMAR

The Rise and Rise of Bangladesh

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Epaar Bangla, Opaar Bangla

Appeal to Political Parties: Reject EVMs,
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ARUP MAHARATNA

Whither Unreasoned Traditions?

FROM N.C.'S WRITINGS

• ARUNA ASAF ALI: A TRIBUTE

Nitish on the Horns of a Dilemma

Bihar Chief Minister Nitish Kumar is unhappy with the BJP. After the Lok Sabha elections, Modi took only one Minister in his Cabinet from the JD(U) even though the JD(U) had won only one seat less than BJP from Bihar. An angry Nitish refused to join the Union Cabinet. Now he has asked the Special Branch of Bihar to inquire into the activities of the RSS and its affiliated organisations in the State. This has angered the BJP no end. Whether the JD(U) of Nitish and BJP will stick together in the next Assembly

elections in Bihar is uncertain. Nitish's problem is that even if the Congress is willing to take him back, Tejaswi Yadav will never break bread with his *Paltu Chacha*. Nitish cannot survive in Bihar politics on his own. If he wants to be in power he will have to align either with the UPA or with the NDA. His own caste-Kurmis—can give him very few seats in the Assembly.

Because of his frequent changing of camps, neither the Congress and RJD, nor the BJP trusts him. The BJP is tolerating him because at the moment it cannot do without Nitish's support. The moment the saffron camp believes it can win on its own, it will jettison him without ceremony. Nitish also knows this. So his ordering a police inquiry into the RSS' activities can be taken to be a well-calculated risk. If the angry BJP withdraws support to him, the BJP-JD(U) Government will fall, President's Rule will be imposed and the next Assembly elections will be conducted under Central, that is, BJP, supervision, with obvious advantage to the BJP.

Perhaps Nitish believes that the dismissal of his government will help him play the victim card and make him acceptable to the UPA. After the severe drubbing that the UPA got in the LS polls the Congress may not be averse to taking him in but taking Tejaswi on board will not be easy. The RSS has already sought Union Home Minister Amit Shah's intervention. This is rather strange because the RSS claims to be a cultural organisation engaged in character-building. Why should it not then welcome an inquiry into its activities by any authority? In any case, the BJP-JD(U) alliance in Bihar is in troubled waters.

As far as the ruling alliance in Bihar is concerned, it has not been functioning well. The large number of children who died as a consequence of encephalitis in the State, especially in Muzaffarpur, did not cause much concern in the State Government. While the media concentrated attention on Deputy CM and State BJP leader Sushil Modi's apathy and indifference to the deaths, Nitish too cannot absolve himself of his responsibility in the matter, can he?

Now one has come across reports of Sushil Modi enjoying a movie while the citizens in the State are acutely suffering due to the Bihar floods. Here too Nitish should have pulled up the Deputy CM but he did not. The question is: if he now jumps ship and returns to the UPA in the State, won't he be a liability for the Alliance? Some RJD leaders (besides Tejaswi) have given ample hint to that effect.

Nitish is definitely on the horns of a dilemma.
July 18 B.D.G.

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RTI, Karnataka, Sheila Dikshit, A.K. Roy

BADRI RAINA

Gandhi or no Gandhi, Priyanka Shows the Way

ANUP K. SINHA

What Does the Union Budget Signify?

A.K. BISWAS

Centenary Homage to the Victims of
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GAUTAM SEN

Sardarshahr: Where is the State to Protect
the Dispossessed and Downtrodden?

SWAMI AGNIVESH

Religions and Politics of Manipulation in
South Asia

FROM N.C.'S WRITINGS
INSANITY ENTHRONED

RTI, Karnataka, Sheila Dikshit, A.K. Roy

With the BJP getting support from the parties that are fence-sitters in the Rajya Sabha to take the ruling conglomerate's strength in the Upper House to a

majority, the NDA, now in power for the second time in the country, is railroading legislations in Parliament. It started with the RTI Amendment Bill today as it was passed in both the Houses even after the Congress staged a walkout in the Rajya Sabha when its demand to send the legislation to a Select Committee was rejected by the Treasury Benches. In effect it was democracy which suffered not just a severe jolt but a direct assault by this approach of the government in power.

But this is just the beginning. Several major Bills lined up for passage and adoption will likewise be steamrolled regardless of how this affects democratic functioning.

In the meantime Karnataka is witnessing a new drama. Several days after the defeat of the Congress-JD(S) Government there the BJP has yet to install its Ministry in the State presumably because of the Assembly Speaker's belated decision to examine and disqualify the rebel Congress-JD(S) MLAs. As of now when we go to the press three of the 15 rebel MLAs have been disqualified. So the murky scenario in that State continues for the present.

Significantly, as many as 49 eminent persons—film directors, actors, stage artistes, historians—have written a letter to the PM seeking immediate measures to end the reprehensible politics of moblynching resorted to by elements linked to the BJP or its sister organisations owing allegiance to Hindu majoritarianism attempting to tear apart national unity. What is regrettable is that leading personalities in the ruling party have taken upon themselves the task of roundly attacking these persons while threatening them with dire consequences for speaking out against the ruling party's role in this context.

Meanwhile, the country has in the last few days lost two extraordinary politicians—Sheila Dikshit, 81, the noted administrator who, during her 15-year stint as the Congress CM in Delhi, transformed the city-state into a modern metropolis; and Marxist trade unionist A.K. Roy, 90, who not only founded the Marxist Coordination Committee (MCC) and raised workers' issues in Jharkhand (where he functioned) but made his mark in Parliament itself especially in his last term in the Lok Sabha (1989-91) when he singlehandedly opposed a proposal in the Lower House to increase the salary and pension for MPs. The country is indeed poorer today due to the departure of these leaders.

July 25

S.C.

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BJP in the Dock following Unnao

RAM PUNIYANI

✓ Modi 2.0: Whither Indian Democracy?

MUSTAFA KHAN

Looking down the road, will there be holocaust in India?

SAUMITRA MOHAN

Need for a National Water Policy

SUNIL RAY

End of 'Left-politics' in India?

B.P. MATHUR

Government's Obsession with Growth— Misleading the Nation

L.K. SHARMA

Political Triplets of New Democracy

FROM N.C.'S WRITINGS

GP'S SELFLESS DEDICATION TO INDIAN DEMOCRACY

BJP in the Dock following Unnao

The BJP's role in the gory happenings around a case of rape in UP's Unnao district has come out in bold relief placing the ruling party at the Centre and in the State in the dock. Two years ago a 17-year-old teenager was allegedly raped in a village in the district allegedly by a locally powerful BJP MLA, Kuldeep Singh Sengar. A year later she sought to draw public attention to the alleged crime by trying to immolate herself before the State Chief Minister's residence in Lucknow. Subsequently her father was mercilessly beaten up and taken to police custody in connection with an Arms Act case and it was there that he breathed his last a few days later, a consequence of what had happened to him when he

was assaulted before being arrested. Thereafter the rape victim's case was transferred to the CBI and Kuldeep Sengar arrested. Later her uncle was convicted in a case filed by Sengar's brother. And on July 28 there was a collision of the car in which she was travelling with a truck bearing a blackened nameplate. It resulted in two of her aunts, her co-passengers, being killed and she as well as her lawyer were critically injured; they are both fighting for their lives in a hospital at present. Today her case came up for hearing in the Supreme Court and now, Sengar, who was suspended from the party earlier, has at long last been expelled from the BJP.

The Apex Court has taken certain positive, significant and noteworthy decisions today: the whole case has been transferred from Lucknow to New Delhi (which shows that the Yogi Government's credibility before the judiciary is at its lowest). The Supreme Court has directed that all the four cases relating to the Unnao incident should be completed within 45 days and in seven days the case of the car accident should be over; it has also ordered that the UP Government pays her Rs 25 lakhs as interim compensation.

What is striking is that some TV channels, which had been fully backing the Modi dispensation, have now raised basic issues relating to Sengar: besides pointing out that it took 253 days for the UP Government to file an FIR against Sengar; 317 days for Yogi's police to arrest him; and 785 days for the BJP to expel him from the party, they have highlighted the exalted position that Sengar occupied in the BJP—with important personalities of the party visiting him in prison. And it is also learnt that there was a conspiracy to bump off the rape victim through the car collision in which some of Sengar's men were involved. Following Unnao, the ruling party at the Centre and in UP has a lot to answer.

Meanwhile, in the monsoon session of Parliament the BJP Government at the Centre is riding roughshod to push through major bills in both the Houses. First it was the RTI Amendment Bill and then the Muslim Women (Protection of Rights on Marriage) Bill (commonly known as the Triple Talaq Bill). Both of these should have gone for legislative scrutiny in Select Committees but those in the Treasury Benches were in a tearing hurry. One only hopes that the country does not have to suffer a major predicament in future as a consequence.

August 1

S.C.

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✓ **Battle-lines Drawn: Save the Country**

MUSTAFA KHAN

© **Stab in the Back: Kashmir Valley Finale**

BHARAT DOGRA

Threat from Nuclear Weapons is Increasing

BARUN DASGUPTA

Call to Build Unity to Resist Fascist Onslaught

FASIHUR RAHMAN

Triple Talaq and Shah Bano Case

AYAN GUHA

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A.K. BISWAS

Saraswati Karketta: Latest Victim of Caste Slur and Harassment in West Bengal

FROM N.C.'S WRITINGS

COMMUNISTS AND 'QUIT INDIA' STRUGGLE

Battle-lines Drawn: Save the Country

The battle-lines have clearly being drawn by now. Since the BJP leadership's surreptitious manner of changing the Constitution—by revoking Articles 370 and 35A—with the country's President signing the order to that effect and the ruling party using its brute majority in the Lok Sabha as well as the Rajya Sabha to pass the relevant Bill, the BJP and its Hindu majoritarian allies are on one side and the secular-democrats of all hues determined to preserve country's diversity, as embodied in the Constitution,

on the other.

India is on the brink of a full-fledged war with Pakistan. Reports had come that large quantities of water were being released to flood the Neelam Valley in PoK but lately it is learnt that India's air attacks would be targeting the dams in that area to achieve the same strategic purpose. The gloves are off. The fight is only for the territory, Kashmir, not its citizens about whose future the BJP stalwarts in power in India are least bothered. This battle is actually between those controlling the levers of power here drawing sustenance from the racial approach of the fascist leaders of Europe in the 1930s, Hitler and Mussolini, on the one side and those resolved to defend the civilisational state epitomised in the Constitution framed on January 26, 1950, our first Republic Day, on the other.

In the parliamentary debate on Article 370, Home Minister Amit Shah launched a frontal attack on the provision saying it was a myth that this Article tied Kashmir to India. This was a clear travesty of the truth. In reality Article 370 was a carefully crafted and negotiated provision intended to cement J&K's place in the Union on the basis of the conditions under which it acceded to India.

Since Article 370 is listed as a "temporary provision", some persons imagine that it is not a basic structure of the Constitution and can thus be done away with. The fact is that it could have been done away with but only by the J&K Constituent Assembly, which chose not to do so thus rendering it permanent.

Amit Shah has sought to redefine the term 'Constituent Assembly of J&K' in Article 370 to mean the State's Legislative Assembly. Having resorted to this unconstitutional sleight Shah then claims that since the J&K Assembly is currently dissolved and the State is under Central rule, Parliament can act as a substitute for the Assembly as well as the defunct J&K Constituent Assembly. With such a breathtaking assertion the Centre is literally playing with fire in Kashmir.

The situation is regrettably going to turn from bad to worse. Since time is fast running out there is no alternative but to oppose Amit Shah's adventurous move tooth and nail while defending and protecting the country in the event of an outbreak of Indo-Pak hostilities that currently appears imminent in the wake of the latest deterioration of diplomatic relations between the two neighbouring states.

August 7

S.C.

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Mainstream

Founded by Nikhil Chakravartty

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August 17, 2019

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✓ The enormity of the measures taken by the Government in the Punjab for quelling some local disturbances has, with a rude shock, revealed to our minds the helplessness of our position as British subjects in India. The disproportionate severity of the punishments inflicted upon the unfortunate people and the methods of carrying them out, we are convinced, are without parallel in the history of civilised governments, barring some conspicuous exceptions, recent and remote. Considering that such treatment has been meted out to a population, disarmed and resourceless, by a power which has the most terribly efficient organisation for destruction of human lives, we must strongly assert that it can claim no political expediency, far less moral justification. The accounts of the insults and sufferings undergone by our brothers in the Punjab have trickled through the gagged silence, reaching every corner of India, and the universal agony of indignation roused in the hearts of our people has been ignored by our rulers—possibly congratulating themselves for imparting what they imagine as salutary lessons. This callousness has been praised by most of the Anglo-Indian papers, which have in some cases gone to the brutal length of making fun of our sufferings, without receiving the least check from the same authority, relentlessly careful in smothering every cry of pain and expression of judgment from the organs representing the sufferers. Knowing that our appeals have been in vain and that the passion of vengeance is blinding the noble vision of statesmanship in our Government, which could so easily afford to be magnanimous, as befitting its physical strength and normal tradition, the very least that I can do for my country is to take all consequences upon myself in giving voice to the protest of the millions of my countrymen, surprised into a dumb anguish of terror. The time has come when badges of honour make our shame glaring in the incongruous context of humiliation and I, for my part, wish to stand, shorn of all special distinctions, by the side of those of my countrymen who, for their so-called insignificance, are liable to suffer degradation not fit for human beings. And these are the reasons which have compelled me to ask Your Excellency, with due deference and regret, to relieve me of my title of Knighthood, which I had the honour to accept from His Majesty the King at the hands of your predecessor, for whose nobleness of heart I still entertain great admiration.

Rabindranath Tagore

[Text of the letter written to the British monarch by the Poet from 6, Dwarkanath Tagore Lane, Calcutta on May 30, 1919 renouncing Knighthood in protest against the massacre of innocent, unarmed Indians at Jallianwala Bagh, Amritsar on April 13, 1919. It is being reproduced here as this year marks the centenary of the Jallianwala Bagh massacre]

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Readers, Please Note

This Independence Day Special being a little less than double the size of an ordinary number, there will be no issue of *Mainstream* on August 24, 2019. The next issue will appear on August 31, 2019.

Grim Scenario on I-Day 2019

Once again we are approaching another Independence Day, our seventythird. But it will be observed under conditions that are qualitatively different from the ones in the past.

Only recently this month, on August 5, the ruling party of the country by dint of the brute majority it enjoys in Parliament (reinforced as it is by its stupendous victory at the hustings barely three months ago thereby recording its second stint in power) carried out a coup of sorts—revoking Articles 370 and 35A of the Constitution that served as a bridge between India and J&K. This, according to the BJP stalwarts in power would be the first decisive step to ensure the State's "real integration" with India. They are totally oblivious of the resultant huge distance that has been caused between the peoples of India and J&K, what with the latter already in the grip of considerable alienation, highlighted by the growing antics of the BJP in power across the country since the summer of 2014.

Against this sombre backdrop (with the strength of the States in the country reduced from 29 to 28 while the number of Union Territories has gone up by two in view of the division of the J&K State into two Union Territories—J&K and Ladakh), we are observing our 73rd Independence Day. True, as far as the measure taken in J&K is concerned, the parliamentary Opposition stands divided. Large sections of the intelligentsia, who are standard-bearers of the democratic tradition set by Mahatma Gandhi and Jawaharlal Nehru, stand by the side of the J&K public and oppose the government's move that has its origins in the days of the Bharatiya Jana Sangh. But it is a fact that due to a conspiracy of circumstances some Opposition leaders and parties have extended support to the Union Government on this issue under the false impression that it would strengthen national unity. This is most regrettable and unfortunate. Doubly regrettable is the division that has come about in the Congress on this subject. While those of its leaders, who are well aware of the J&K situation, fully oppose the revocation of the aforementioned Articles, the others have a different view. Most noteworthy is the position taken by all sections of the Left regardless of the differences among them on other questions. This is principled and bold without any trace of vacillation and/or ambivalence.

Reviewing the overall national situation prevailing today, one is reminded of the words our first PM articulated in a message on August 15, 1947, our first Independence Day. According to Jawaharlal Nehru

"We are citizens of a great country on the verge of bold advance... All of us, to whatever religion we may belong, are equally the children of India with equal rights, privileges and obligations. We cannot encourage communalism or narrow-mindedness for no nation can be great whose people are narrow in thought or in action."

These words are of exceptional significance today when those in power are hell-bent on weakening the foundations of our secular democracy, one of our most precious possessions, a product of our independence. On this auspicious occasion we need to renew our pledge to defend the very same secular democracy that is under constant threat from those in power. The latest move in J&K is a clear manifestation of that danger. It must be resisted with all the strength at our command

August 11

S.C

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Restore Nehruvian Economic Policies

AYESHA RAY

India's Colossal Blunder in Kashmir

VIJAY KUMAR

Abrogation of Article 370: Blatant Subversion of Democracy and Federalism

BADRI RAINA

Article 35A Is Dead: Long Live Article 35A

BEENA SARWAR

Rest in Peace, Comrade Kutty. The Struggle Continues

GOPAL KRISHNA

Solidarity of "Social Left" alone can guide the "Party Left"

FROM N.C.'S WRITINGS
• BHUPESH : SOME REMINISCENCES

Restore Nehruvian Economic Policies

The BJP Government had been casting covetous glances on the RBI reserve fund for quite some time and the RBI was resisting it. It was mainly on this issue that the former RBI Governor Urjit Patel resigned in December, 2018. During his time as Finance Minister the late Arun Jaitley tried to curb the autonomy of the RBI by amending certain sections of the RBI Act. That effort thankfully did not succeed.

The virtual looting of the RBI reserves by the Modi Government is to make up for the huge budget deficit it is going to face at the end of the current fiscal, that is, after March 31, 2020. This, along with a slew of tax concessions to corporate bosses announced by Finance Minister Nirmala Sitharaman, will not, however, overcome the recession-hit economy where demand is not only stagnant but falling. Here are

some telltale figures: At the moment there are 15 lakh unsold motor cars, 30 lakh unsold two-wheelers and 13 lakh unsold housing units. The concessions given to the corporate sector will not *per se* stimulate demand. The industries facing demand crisis are laying off or dismissing thousands of employees. So, instead of creating new employment, those employed are also joining the army of the unemployed.

As we go to press, information has come that the Modi Government is determined to go ahead and privatise Air India. Now this is another way to reverse the Nehruvian policies in the economic sphere. Nehru opted for a mixed economic framework but underscored that the public sector would gradually acquire the commanding heights of the economy. The Modi Government, in its blind hatred of Nehru, is ensuring that the private sector instead reaches the commanding heights of the economy. This needs to be roundly decried.

The money that the Modi Government has virtually looted from the RBI coffers will go to meet its current expenses which means market liquidity will increase and if this huge volume of money comes into circulation, it will have an inflationary impact on the economy, leading to price spiral.

The government has infused Rs 70,000 crores to banks for recapitalisation. This has become necessary because many big bosses of the corporate sector borrowed huge money from the banks and did not repay either the principal or the interest thereon. They stole public money and several of them fled the country. The capital base of most banks has been eroded. Now the common taxpayer is being fleeced to compensate the banks.

This year the government may tide over the economic crisis with money looted from the RBI coffers. But what about the future? Unless the basic causes of rising revenue deficits are tackled and removed, budget deficit, year after year, cannot be controlled. This is a chronic malady that needs structural changes in the economy on Nehruvian lines. But the government will not make these changes in order to protect the corporate bosses from being hurt.

This is the logical consequence of reversing the policies in the realm of our economy initiated long years ago by our first PM with the objective of guaranteeing our self-reliant advance. Those policies must be restored at the earliest in national interest.

There is no other alternative.

August 29

Analyst

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August 30-September 5, 2019 ■ MAINSTREAM

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Founded by Nikhil Chakravartty

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New Delhi

September 7, 2019

Kashmir, NRC, Teachers' Day

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National Register of Citizens:

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Divisive Institution Creating Statelessness

Kashmir Caged

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FROM N.C.'S WRITINGS

• PRESERVE RADHAKRISHNAN'S GIFT TO THE NATION

Kashmir, NRC, Teachers' Day

A month has passed since the complete shut-down in Kashmir accompanying the abrogation of Articles 370 and 35A of the Constitution delivering a body blow to the special status of the State that was painstakingly worked out with the purpose of preserving the *Kashmiriyat* of the people therein (even if it was regrettably substantially eroded over the years, a charge levelled by the active proponents of the Kashmiri public opinion). Despite the Modi-Shah dispensation's concerted efforts to highlight the return of "normalcy" in the Valley, that is belied by those visiting the State (as has been brought out in

the report of a four-member team of civil society activists who visited the region soon after the momentous developments of August 5, 2019—see pages 5-9 in this issue). The public are resentful and indignant even if the huge presence of security forces prevent them from freely expressing their views in public. The restrictions on Opposition MPs from visiting the State are also a glaring testimony to the actual ground situation in Kashmir to this day.

It is in this background that Congress spokesperson and former Union Minister Manish Tiwari has conveyed his grave concern over the prevailing conditions in J&K terming those as "worse" than what one had witnessed during the Emergency. He also claimed that since August 5, when those Articles were revoked, civil rights have "ceased" to exist in the Valley.

Meanwhile, the publication of the final list of the National Register of Citizens (NRC) on August 3 has not brought the issue of illegal immigration in Assam to its expected conclusion. The fact that over 1.9 million persons were excluded from the NRC proves that numerous citizens in the State are facing the spectre of statelessness, which is a matter of deep anxiety. Reviewing the scenario on this subject *The Hindu* aptly notes: "While the Assam Chief Minister struck a temperate tone, the studied silence of the Prime Minister and Home Minister on the (final NRC list) publication day is unnerving. Of greater concern is the stance of the de facto No. 2 in the State Government, who said that the NRC was no quarter-final, semi-final and final for driving out Bangladeshis and promised 'more finals.'" Does it indicate that only non-Muslims outside the NRC would eventually get citizenship? That will not be acceptable to the country as a whole if we are to safeguard the principle of secular democracy.

Today (September 5) is Teachers' Day. One's thoughts go back to 1958 when as a class VIII student one was expressing, with one's classmates, gratitude to one's teachers on a Teachers' Day that year. One of the classmates delivered a brilliant speech complimenting the teachers for having inculcated in the students the spirit that we should all "become citizens of the world" crossing the national boundaries. This is so striking in today's context that it needs to be repeated on every Teachers' Day for the benefit of all of us and especially those of our leaders whose myopic eyesight never lets them understand anything beyond the narrow confines of nationhood.

September 5

S.C.

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US, Taliban, *I'affaire* Chinmayanand

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After Abrogation of Article 370

FROM N.C.'S WRITINGS

· WHY NAXALISM?

US, Taliban, l'affaire Chinmayanand

Eighteen years have passed since 9/11—the attack on New York's twin towers by the Taliban of Afghanistan just to demonstrate their power against the world's most powerful country, the USA. And now 18 years since that fateful day *The Times of India* published a brilliant editorial page article yesterday pointing to an irony: "America stands ready to restore to power the very forces that gave rise to 9/11".

The article by the Washington correspondent of the *TOI* highlights the importance of Ahmad Shah Massoud, the legendary Afghan leader who was instrumental in the Soviet withdrawal from Afghanistan and was popularly known as the 'Lion of Panjsher'. Incidentally September 9, 2001 (that is, two days before 9/11) Ahmad Shah Massoud was tragically killed by deceit by two Moroccan suicide bombers in his Panjsher hideout. Those bombers, masquerading as journalists, had sought and interview with Massoud. When the interview was in progressed the bombers set of a bomb pack into the camera and in a battery-pack belt. Massoud was killed as a consequence. But there was another person in the room—a friend of Massoud; he was the Afghan envoy to New Delhi. His was a providential escape

due to Massoud—he had his passports in his coat pocket. He wanted to remove them but was dissuaded from doing so by Massoud himself and that is what saved him from the impact of the bomb blast: yet another manifestation of Massoud's talent and intelligence. This is what his friend, Khaleeli, the Afghan envoy, himself told us subsequently in an informal get-together at the Afghan embassy in this city. Massoud was removed from the scene under Osama bin Laden's orders but the most delighted by his death were Pakistan and its intelligence agency, the ISI.

Massoud was indeed a magnetic personality. There was yet another such figure, Dr Najibullah, head of the Afghan Government in Kabul before the Taliban takeover. Asked as to who would be acceptable to the coalition government proposed by him, he told us, journalists including this writer, that we "do not like to involve only those who have close politico-ideological links with us" but all those "who agree to put an immediate end to fratricidal war and not permit in the future to make use of armed forces for solution of internal issues". The Taliban, which entered Kabul, killed him brutally, like Massoud, while he was in the UN premises there.

The operative part of this sharp write-up is in the following words:

Eighteen years after that fateful day for Afghanistan and the region, Taliban is on the cusp of making a comeback... Washington... is poised to effectively restore to power in Kabul the very forces that engendered the biggest terror attack on American soil. In its march of folly, the United States is yet again ready to snatch defeat from the jaws of victory.

Meanwhile *l'affaire* Chinmayanand exposes yet another BJP leader indulging in rape and sexual assaults on young girls after Kuldeep Singh Sengar, close on the heels of the latter's rape and murder case. Last Monday (September 9) the victim, the law student from the SS Law College in UP's Shahjahanpur district, came out with more serious allegations than kidnapping and criminal intimidation. The suggestion is that there should be a court-monitored investigation to ensure that the powerful Chinmayanand, running several *ashrams* and colleges in the State, does not wriggle out through legal loopholes especially when the victim has observed that "there are many girls whose lives have been destroyed" by the accused. Simultaneously an independent police is imperative to implement stringent anti-rape laws.

September 12

S.C.

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This map shows the sea ice extent—the amount of ocean surface area covered by ice—in September 2012, its lowest point since record-keeping began in 1979.

NATIONAL SNOW AND ICE DATA CENTER; GREEN MARBLE

EMBARK

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Why You Like What You Like

Our personal tastes and our actions are driven by hidden biological forces.

BY BILL SULLIVAN

CAPTURED

A Solar System Giant, Ready for Its Close-Up

A stunning data-driven image of Jupiter.

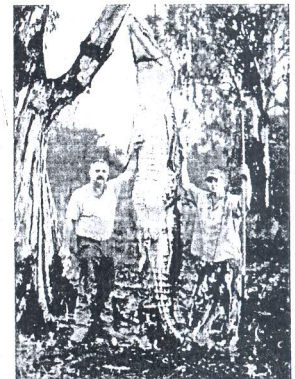
IMAGE BY KEVIN GILL



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THROUGH THE LENS

Death Comes for a Crocodile

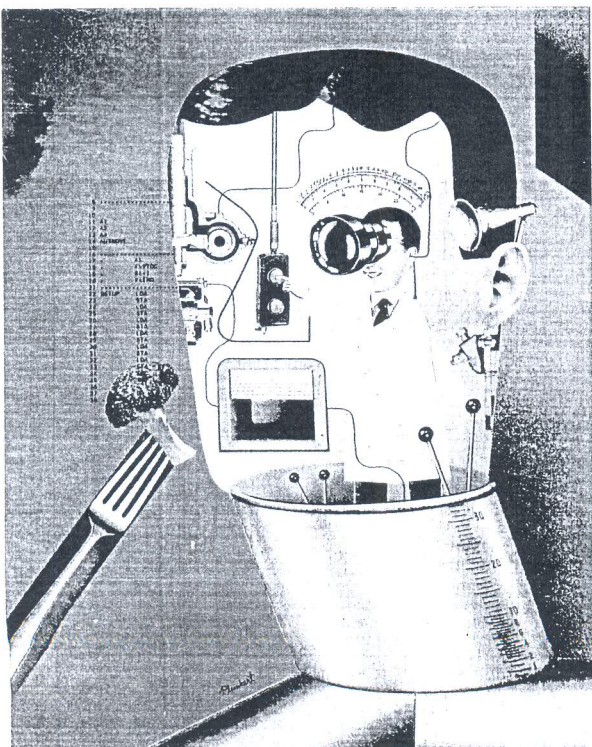
In Australia, an epic hunt for a saltwater crocodile ends on an unexpected note.

BY TREVOR BECK FROST

ALSO

Herbs in Detail
A Tool for Tigers

Handwritten notes in Hindi: "06/09/19" and other illegible text.



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The New Cold War

In the Arctic, nations are jostling for access to a frozen frontier.

BY NEIL SHEA
PHOTOGRAPHS BY
LOUIE PALU

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Permafrost is thawing fast, releasing carbon that fuels warming.

BY CRAIG WELCH
PHOTOGRAPHS BY
KATIE ORLINSKY

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The Franklin Expedition set out to chart the Northwest Passage. Then it vanished.

BY HEATHER PRINGLE

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Studying the warming Arctic means joining a unique community.

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A moving encounter with one of Earth's most adaptable predators.

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ACACIA JOHNSON

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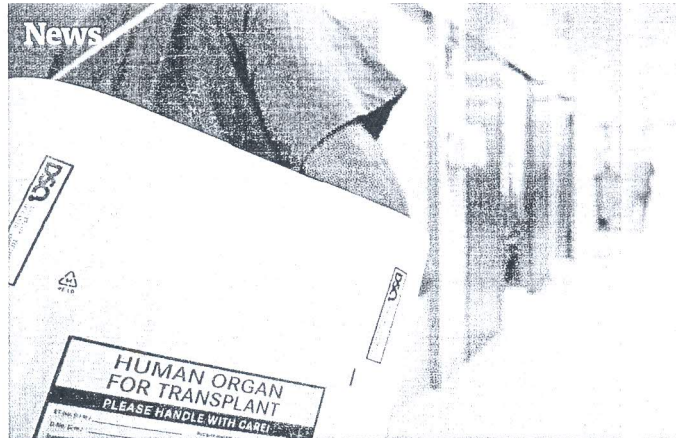
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JACEK SOPOTNICKI/GETTY; TOP RIGHT: MICHAL BEDNARSKI

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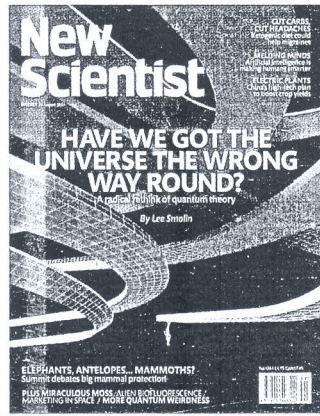
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Christiana Figueres talks about next steps on climate change. For more information, see: newscientistlive.com

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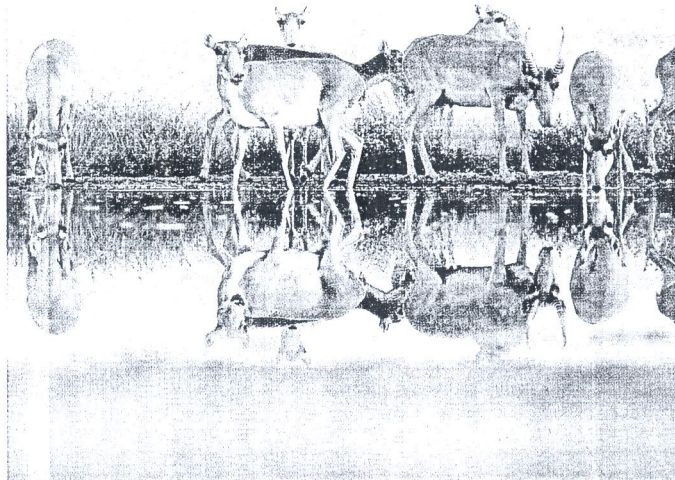
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Picture of the week Share your photos on the theme of 'discovery'

We'd like to feature your photos of the wonders of science and technology in our upcoming picture of the week slot. The first theme will be "discovery". Send us your discovery-themed photos, with a short (25 words maximum) description, to readerpics@newscientist.com by 10am on Tuesday 27 August. We'll publish our favourite in the 7 September issue of *New Scientist* and share it on Instagram the following week. (Terms and conditions at newscientist.com/pictureoftheweek-terms)

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कुलकावली गैर प्रलेखन प्रयोग,
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Now in 3D!

New Scientist Live

6 weeks to go!
Discover our biggest and best speaker line-up ever at our 4-day festival of science. Find out more at newscientistlive.com



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The UK government is using AI to predict spikes in Brexit-related hate crimes

Polio success
Wild polio virus has been eradicated in Nigeria, but the battle isn't over yet

Dawn of the pyrocene
Arctic wildfires could spur a powerful feedback loop

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Genetic medicine tests the limits of patient confidentiality, says Laura Spinney

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James Wong delves into claims that fruit is bad for you

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Using biomass to make fuel is a criminal waste

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Coastal erosion Crumbling cliffs prompt communities to retreat

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5 weeks to go!
Hear Liz Bonnin talk about the problem with plastic at our four-day festival of science. Find out more at newscientistlive.com



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Many genes shape sexuality, each having only a small effect

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Early Australopith skull discovered at last

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Our cars will soon track our every move - and correct our mistakes too

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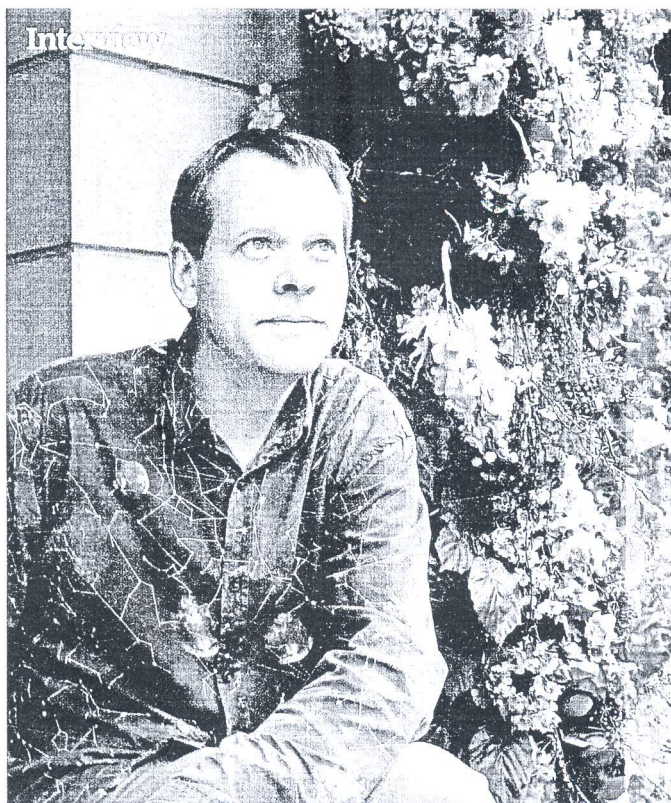
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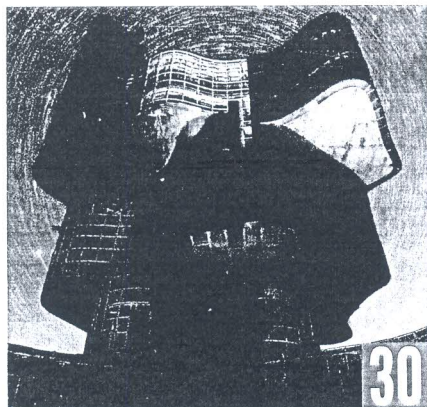
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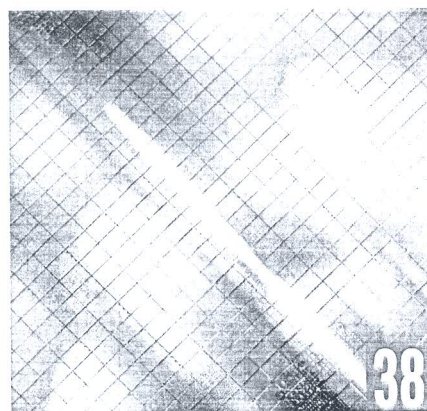
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30 Physics in the former Yugoslav Rep. From socialist utopia to capitalist realities

Mičo Tatalović and Nenad Jarić Dauenhauer

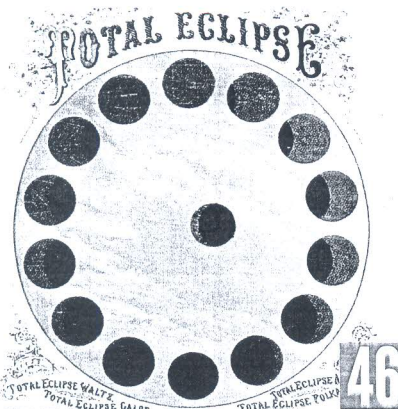
The homeland of Nikola Tesla and Jožef Stefan saw a rise in physics funding after World War II. Now, after the destruction wrought by the Yugoslav Wars of the 1990s, physics in Yugoslavia's successor states is recovering, albeit unevenly.



38 Quantum computing with semiconducting qubits

Lieven M. K. Vandersypen and Mark A. Eriksson

Arrays of electrically and magnetically controllable electron-spin qubits can be lithographically fabricated on silicon wafers.



46 The North American eclipse of 1869

Deborah Kent

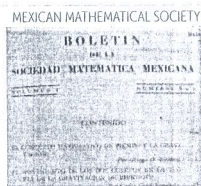
A coast-to-coast eclipse on 7 August 1869 gave US astronomers a chance to make their mark on 19th-century astronomy.



ON THE COVER: Designed by architect Živa Baraga and sculptor Janez Lenassi, the *Monument to the Fighters Fallen in the People's Liberation Struggle* (1965) stands in a park in Ilirska Bistrica, Slovenia. Physics flourished in Yugoslavia after World War II but foundered during and after the Yugoslav Wars of the 1990s. For an account of the history and current state of physics in the region, read Mičo Tatalović and Nenad Jarić Dauenhauer's article, which begins on **page 30**. (Photo © Valentin Jeck, commissioned by the Museum of Modern Art, 2016.)

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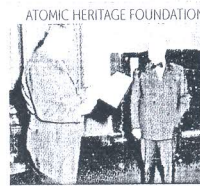
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Graef v. Einstein
In 1944 Albert Einstein invited Mexican physicist Carlos Graef Fernández to discuss a theory of gravity that was an alternative to general relativity. Gustavo Arciniega chronicles the physicists' debate and explains how it signaled the rising prominence of physics in Mexico.
physicstoday.org/Aug2019a



Physics Olympiad
Hundreds of high school students from around the world converged on Tel Aviv, Israel, in July for the 50th International Physics Olympiad. **PHYSICS TODAY's** Toni Feder covers the overall results and the performance of the US team, whose five competitors finished fifth in combined points this year.
physicstoday.org/Aug2019b



Pecher and Sengier
The history of early US radiation science usually focuses on the making of the atomic bomb. Amand Lucas tells the stories of Charles Pecher and of Edgar Sengier (above right), who contributed in other ways—through advances in nuclear medicine and by supplying the Allies with uranium.
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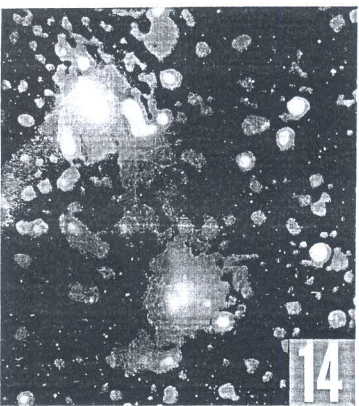
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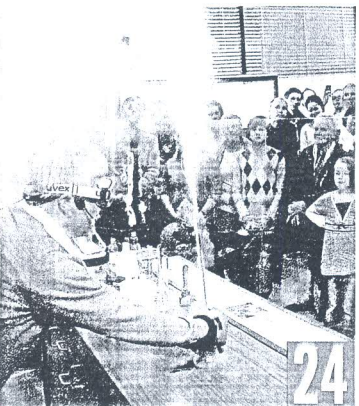
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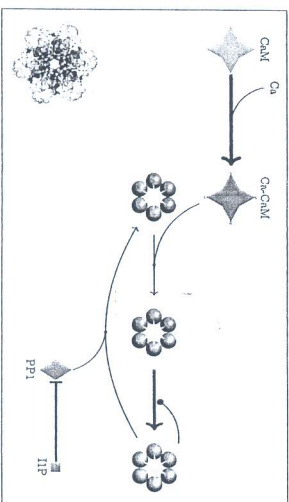
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A typical nest of the Indian paperwasp *Popalidia marginata*, showing several adults and cells with brood in various stages of development. (Photo: Dr. Theresamma Varghese).

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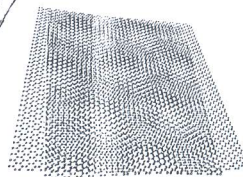
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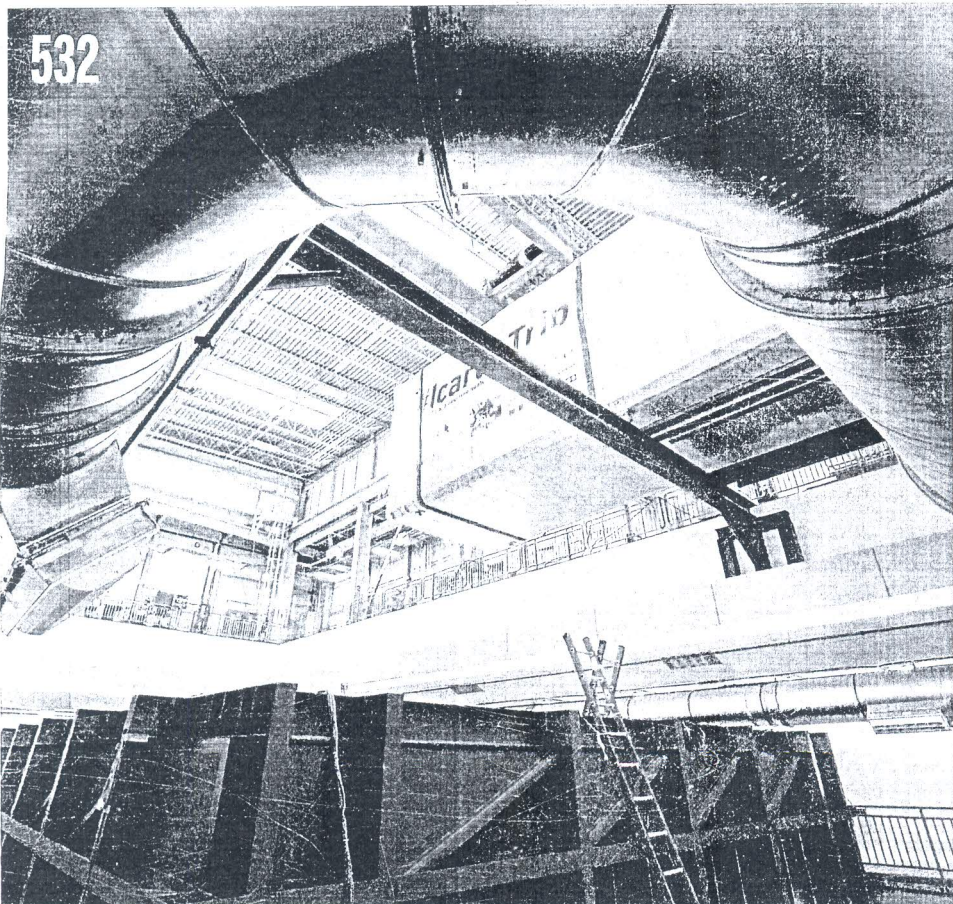
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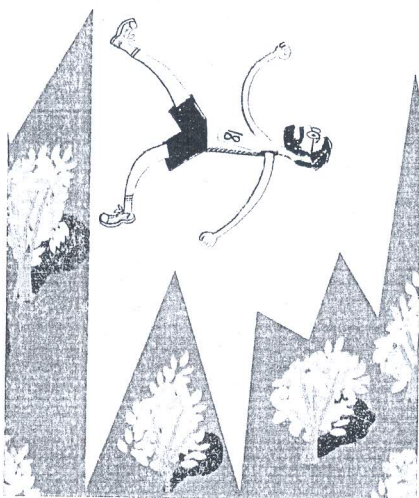
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exosuit's minimally restrictive design allows the user to move naturally, and it switches seamlessly between the two gaits, paving the way for future applications that require dynamic and adaptive assistance. See pages 636 and 668. *Illustration: V. Altoumian/Science; 3D model: Harvard Biodesign Lab*

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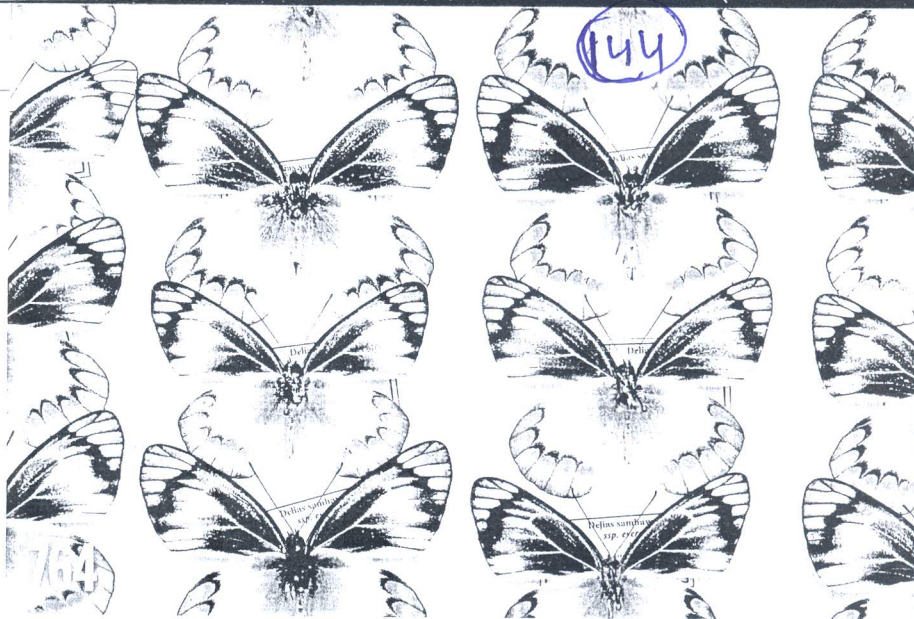
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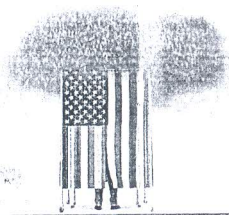
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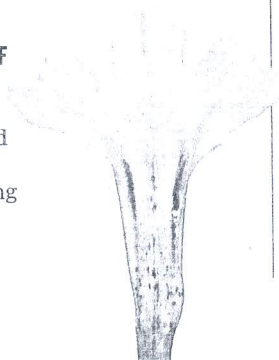
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ON THE COVER



Many real-world settings involve interacting parties with private information. As the prototypical such setting, poker has been a grand challenge in game theory and artificial intelligence (AI) for seven decades. A new poker AI, Pluribus, has reached the key remaining milestone: superhuman performance when there are multiple opponents at the table. Prior superhuman game-playing milestones—even in perfect-information games—have been limited to two-player games. See pages 864 and 885. Illustration: Jason Solo/The Jacky Winter Group

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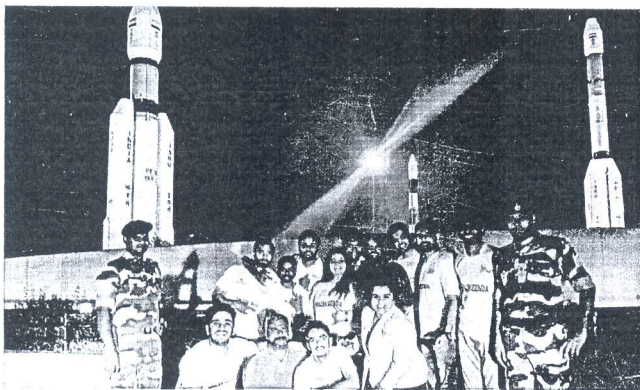
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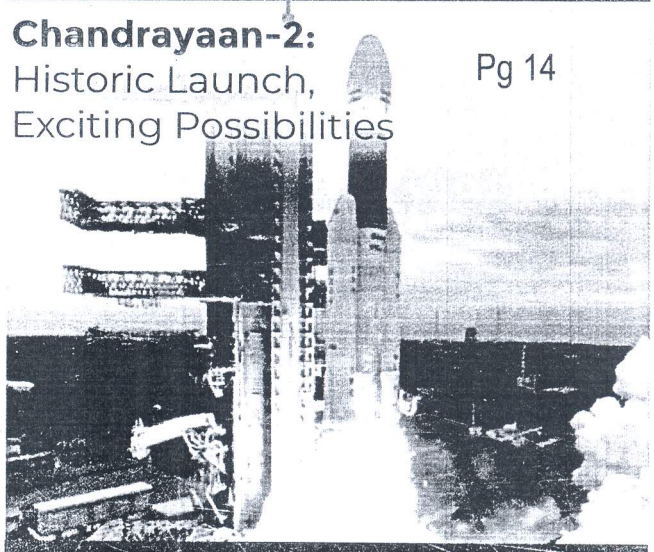
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Special Issue: Innovation and Work in East Asia

Guest Editors: Naubahar Sharif and Yu Huang

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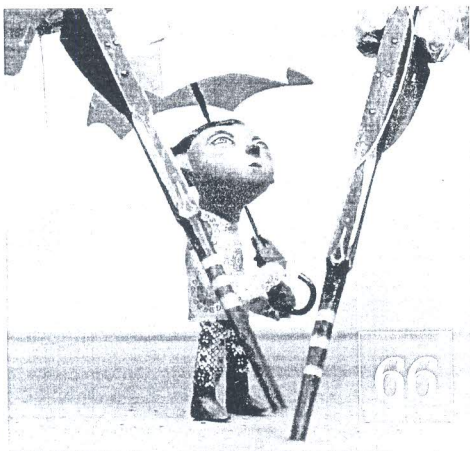
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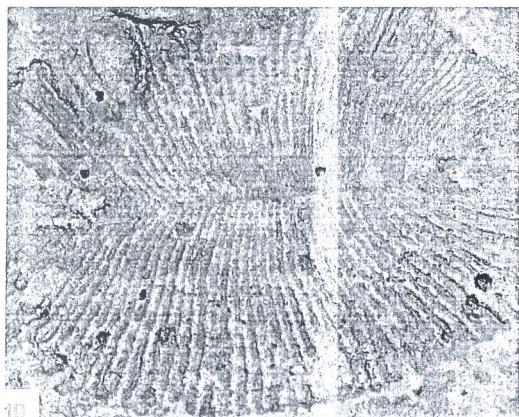
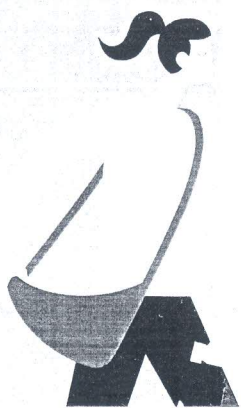
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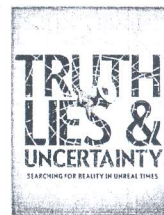
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For the cover and inside pages of this special issue, we asked the artists at Red Nose Studio to find concrete ways to illustrate the abstract themes of truth, lies and uncertainty. For the illustrations on pages 22, 42 and 66, the artists took inspiration from the saying that only "fools and children tell the truth." Illustration by Red Nose Studio.

ON THE WEB

Lonely Planets

It has been 30 years since the Voyager 2 spacecraft flew by Neptune, which like its planetary sibling Uranus is an "ice giant" world in the outer solar system. Now some scientists are contemplating a return. Go to www.ScientificAmerican.com/sep2019/lonely-planets

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a symposium on

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Quality Ladder to Excellence in Higher Education

Mariamamma A Varghese*

Often, Quality in Higher Education is not clearly understood by academicians, administrators and students. Many a times, the considerations of the multiple objectives conceived by eminent educationists in terms of behavioral objectives are not realized through the practices followed. In order to ascertain the quality of education, the Institution, Management, Leadership, Faculty, Students and other stakeholders should be aware of the objectives in the cognitive, affective and psychomotor domain for the student's overall development. In order to accomplish these different types of objectives, one needs to analyse the types of inputs required, the processes involved and the outcomes achieved. Just by assessing the examination records and comparing with others is not enough to assess the quality status of the higher education. Experts have come up with various models to assess the quality by focusing on different aspects like outputs, inputs, programmes, resources and the educational processes in general. Some stress on the fact that if the educational processes are systematic and mature, it is bound to achieve the desired outcomes.

Approach

In order to achieve excellence, we need to have in mind some predetermined parameters and the strategies we need to adopt to reach the benchmarks. We need to measure the present quality status in order to know where we are and we also need to know where we are aiming to reach. Then, it is possible to map out a possible course of action to reach the pinnacle of excellence. According to International Organisation for Standardisation (ISO), assessment is a three-point process which involves checking:

- Suitability of the planned procedures in relation to the stated objectives
- Conformity of the actual activities with the plans and
- The effectiveness of the activities in achieving the stated objectives.

Here, the quality assessment is to check to see whether the organization is structured to achieve the objectives or the goals of the organization. In other words, it is a check to see whether the organization is fit for the stated purpose. Thus, the meaning of quality that is embedded in the ISO concept of quality audit is that of fitness for purpose or fulfilling requirements. Some do not agree to the concept of quality as fitness for purpose on the ground that it is too limited or too product oriented. Of all the ways in which the word quality is used nowadays, fitness for purpose is the most useful because it embraces all the meanings and lay emphasis on the intent rather than the checking.

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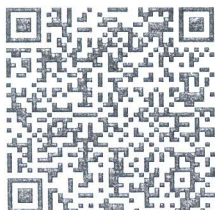
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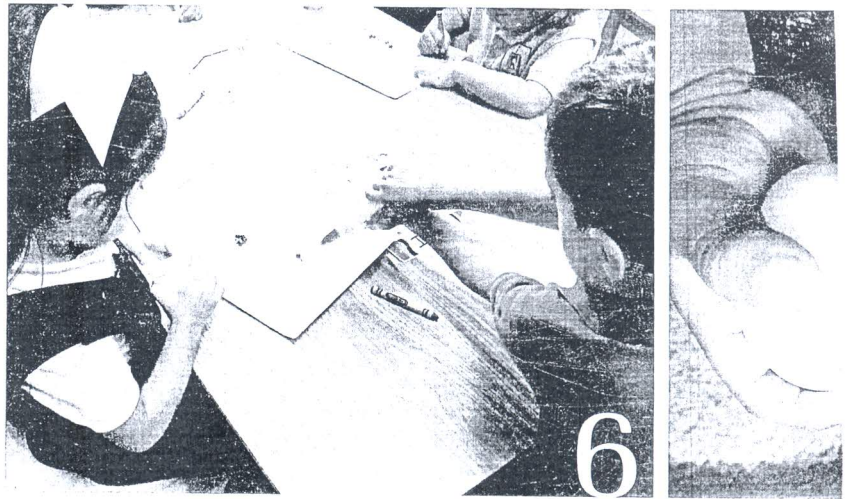
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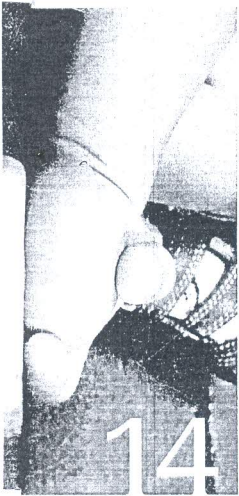
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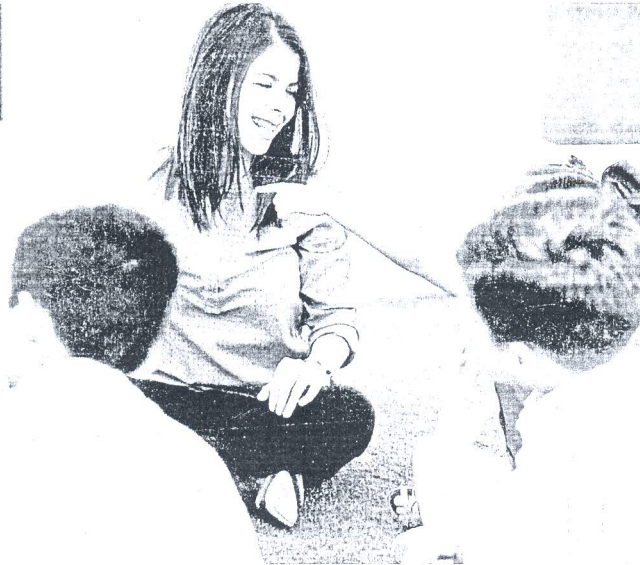
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