

# Life of science: On Indian Science Congress

## The Science Congress needs new ideas, and not a mix of myth and pseudoscience

The Indian Science Congress (ISC) — its 107th edition is under way in Bengaluru — has served as a reminder of the status accorded to science and technology in the early years of the Indian republic. Though the formation of the congress pre-dates the Indian republic, it was the intellectual nursery of modern science in the country. Early ideas of how science and technology could aid the development of the new nation were incubated at this coming together of scientists. It is for this reason that the congress, normally held in the first week of January, is inaugurated by the Prime Minister. The years since have seen the nature of the congress change: from one where scientists, in the era of postal communication, congregated to exchange scientific ideas to one today where it has become a 'science mela'. The prime purpose of the ISC now is to draw school and science college students to hear Nobel Laureates and Indian-origin scientists from abroad to lecture about their work and the future prospects of science. The other draws are science projects and innovations by schoolchildren and stalls showcasing scientific work being done in key national laboratories and institutions.

But there is an unmistakable decay, a choreographed ennui, that has set in. In recent years, the congress often makes news for becoming a forum for pseudoscience and less for interesting scientific ideas or demonstrations. Speakers — some holding distinguished positions in leading universities — have tended to mix mythology and science and publicise far-fetched assertions: that the Kauravas were born from stem-cell technology and the Vedas discussed avionics. While this has eroded the congress's public image, the government itself does not seem too keen to vitalise it. The exhibits at several scientific laboratories are re-runs from old congresses, or from similar and past science fairs. Many laboratories showcase their work as 'posters' rather than actually showing demonstrations or working inventions. Several luminaries of India's science establishments — the Principal Scientific Adviser, secretaries from several ministries, the chiefs of major organisations such as ISRO or the Department of Atomic Energy, who have been fixtures, or have at least had their organisation present a dedicated talk or session, were absent this year. It is inevitable that traditions change over time and the relative importance accorded to institutions wax and wane. However this must make way for inspiring new ideas, or new models of taking science to the public. A rising trend in science displays, at museums or exhibitions in many places, is to mix science and art as well as make interactive displays that encourage audience engagement. A rebirth, and not a creeping requiem, is what the congress needs.

### **Meanings of Difficult Words :**

- **congress** (noun) – conference, convention, seminar/forum, symposium.
- **myth** (noun) – misconception, story, misbelief.
- **pseudoscience** (noun) – pseudoscience consists of statements, beliefs, or practices that are claimed to be both scientific and factual but are incompatible with the scientific method.
- **under way** (adverb) – in progress, happening, taking place.
- **accord** (verb) – give, grant, present.
- **predate** (verb) – happen at a date earlier than (something).
- **intellectual** (adjective) – academic, knowledgeable, literary, enlightened/scholarly.
- **nursery** (noun) – origin, place of origin, breeding place.
- **incubate** (verb) – give support and aid the development of (a new small business/pursuit/profession).
- **congregate** (verb) – assemble, gather, muster.
- **draw** (verb) – attract, capture, catch the eye of, lure.

- **laureate** (noun) – a person who is honoured with an award for outstanding achievement.
- **prospects** (noun) – chances, opportunities, possibilities.
- **draw** (noun) – attraction, pull, appeal, glamour.
- **stall** (verb) – obstruct, impede, restrain.
- **choreograph** (verb) – organize, arrange, scheme (an event or operation).
- **ennui** (noun) – boredom, weariness/lethargy; dissatisfaction.
- **set in** (phrasal verb) – begin, start, arrive (of something unpleasant).
- **tend to** (verb) – be inclined, gravitate, be likely.
- **distinguished** (adjective) – important, significant, respected.
- **far-fetched** (adjective) – unlikely, implausible, difficult to believe.
- **assertion** (noun) – declaration, statement, claim/opinion.
- **stem-cell** (noun) – cells with the potential to divide into more stem cells or can become any type of cell in the body.
- **avionics** (noun) – the science and technology of the electronic parts/systems/devices used in astronautics.
- **erode** (verb) – (gradually) deteriorate, destroy, spoil.
- **keen to** (adjective) – interested in.
- **vitalise** (verb) – strengthen, energize, revive.
- **re-run** (noun) – repeat, recurrence, re-occurrence.
- **luminary** (noun) – leader, expert/master, dignitary, VIP.
- **fixture** (noun) – a person who is well established in a particular place.
- **inevitable** (adjective) – unavoidable, sure to happen, unpreventable.
- **wax and wane** (phrase) – increase and decrease alternatively.
- **make way** (phrase) – make a space, clear the way, allow through.
- **interactive** (adjective) – united, collective, coordinated.
- **creeping** (adjective) – (of a negative manner) occurring, developing gradually.
- **requiem** (noun) – an act of remembrance.

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## **Missing the wood: On anti-CAA resolution in Kerala Assembly**

### **Rather than denounce Kerala's CAA resolution, Centre must seek to understand the objections**

The Kerala Assembly's resolution calling upon the Centre to repeal the Citizenship (Amendment) Act, 2019, reflects the widespread unease and disquiet the legislation has caused. Rather than treat it as a controversy over the question whether a State Assembly is competent to question the law on a matter under the Union government's domain, the Centre should reflect on the core issue: that the CAA may be in violation of the equality norm and secular principles enshrined in the Constitution. Given how deeply the country is divided on the changes in the law, Kerala's example may set the stage for a wider confrontation between the Centre and States that have expressed their disinclination to give effect to the Centre's policy in this regard. The resolution reflects a legitimate concern that in enacting the CAA, the Centre has written a patently discriminatory norm into the law. There is justified opposition across India on the amendment's implications, especially in combination with the expected follow-up action in the form of establishing a citizenship register. Kerala Chief Minister Pinarayi Vijayan is among several CMs who have spoken out against the CAA's discriminatory nature, but his has been the first regime to

adopt a formal resolution for repeal. The Centre must make an effort to understand the underpinnings of the ongoing protests against its amendments, of which the Kerala resolution is surely a part.

Union Minister Ravi Shankar Prasad and Kerala Governor Arif Mohammad Khan have denounced the adoption of such a resolution, the former arguing that all States had a constitutional duty to implement central laws. However, the principal objection — that citizenship being a matter concerning the Union, it is not open to State Assemblies to give their opinion on it — is not valid. To the extent that a State government believes that a parliamentary law is not constitutional, it is entirely in order for the State legislature to call for its repeal. Further, a resolution is not legislation, and is not governed by the principle of legislative competence. It is only an expression of a political opinion. Tamil Nadu, for instance, has passed several resolutions concerning India's foreign policy — such as asking for a war crimes probe against Sri Lanka and even a referendum on 'Tamil Eelam'. There is a technical problem on the resolution's admissibility. Kerala Assembly rules say matters pending before a court or those that do not concern the State should not be admitted in the form of a resolution. However, these are minor issues. Ultimately, the House Speaker decides on admitting a resolution, and it is an internal matter. Voicing support for the CAA and disapproval of Kerala's resolution are also valid political opinions, but these should not translate into any ill-advised action such as hauling up the Chief Minister before the Privileges Committee of Parliament.

### **Meanings of Difficult Words :**

- **missing the wood (for the trees)** (phrase) – missing the bigger picture because they are too focused on the details.
- **denounce** (verb) – condemn, criticize, attack, censure/castigate.
- **call upon** (phrasal verb) – demand, require, ask formally.
- **repeal** (verb) – cancel, reverse, nullify.
- **disquiet** (noun) – distress, unease, worry/concern.
- **competent** (adjective) – suitable, appropriate; proficient.
- **reflect on** (phrasal verb) – think about, contemplate, consider/mull over.
- **secular** (adjective) – non-religious.
- **enshrine** (verb) – to enclose in, preserve, treasure, protect (as valuable).
- **set the stage for** (phrase) – prepare the circumstances for beginning of something.
- **confrontation** (noun) – struggle, conflict, fight.
- **disinclination** (noun) – unwillingness, opposition, objection.
- **in this regard** (phrase) – in connection with the aspect/consideration/point referred earlier.
- **patently** (adverb) – obviously, clearly, apparently/without doubt.
- **discriminatory** (adjective) – prejudicial, biased, unfair.
- **implications** (noun) – consequence/outcome, ramification, repercussion.
- **speak out (or up)** (phrasal verb) – speak publicly, speak openly, speak boldly, speak one's mind.
- **repeal** (noun) – cancellation, abrogation, withdrawal.
- **underpinning** (noun) – nucleus, kernel, basis/fundamental, core (ideas/motives).
- **competence** (noun) – (legal) authority, power, control.
- **referendum** (noun) – public vote; a direct vote in which people cast ballots to decide on a specific issue or policy.
- **admissibility** (noun) – the quality of being acceptable/valid.
- **ultimately** (adverb) – eventually, in the end, essentially.
- **voice** (verb) – express, make public, state/declare.
- **ill-advised** (adjective) – ill-considered, misguided, injudicious.
- **haul up** (phrasal verb) – compel, force someone to appear in a court for trial/criticism.

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# Berth pangs: On Maharashtra portfolio allocation

## In Maharashtra, disaffection within the coalition unduly delayed portfolio allocation

With its expansion on Monday, the Maharashtra Council of Ministers is now 43 strong: the three key partners of the Maharashtra Vikas Aghadi (MVA), the Shiv Sena, the Nationalist Congress Party (NCP) and the Congress got 15, 16 and 12 berths in the Ministry, respectively. Ajit Pawar, the nephew of NCP chief Sharad Pawar who vaulted to the BJP camp to briefly become the Deputy CM, now holds the same post in the government, almost as if his act of defiance of the party leadership did not happen at all. The sharing of portfolios remains a bone of contention among partners and within each party. Chief Minister Udhav Thackeray could not meet the deadline he had himself set for announcing the portfolios, which was a day after the expansion. He will be able to arrive at an agreement with leaders of allies and party colleagues, but that will not necessarily end bad blood and resentment in the camp. The MVA is an unlikely alliance as the Sena does not share a common ideological platform with the other two parties. Sena, the oldest ally of the Bharatiya Janata Party (BJP), turned against the latter not on any question of ideology but on disagreements over power-sharing. The three parties are now bound by a shared rivalry with the BJP, and they also have a limited shared agenda. The endurance of that agenda and their bonding will be constantly tested and the bickering over portfolio allocation is one such occasion. Home, Revenue and Finance portfolios lend Ministers considerable sway and there are always multiple claimants for them.

The MVA consolidated several social and economic interest groups that perceived a threat from the BJP, and has good reasons to stay together till it gets closer to the next election. The opportunism in this alliance apart, the peaceful mobilisation of protesters against the Citizenship Amendment Act in recent weeks without any hostility from the police was indicative of the significance of the MVA as a bulwark against the BJP. Hunger for power could be a potent adhesive, but also the source of disarray for the alliance. The birth pangs of the Thackeray government, which took oath on November 28 and took until December 12 for the first round of portfolio allocation, then until December 31 for the expansion of the council, must act as an alert for all leaders. The populous cohort of dynasts in the council, which includes the CM and his son, also points to an inherent contradiction of most non-BJP parties. The Congress has eight, the NCP seven and the Sena has three members including the CM, in the council, who have acquired power as inheritance at least in part. The BJP too had its share of dynasts when it was in power. However, in the absence of a strong ideological orientation, dynastic politics becomes more jarring in non-BJP parties even as it remains essential for their sustenance.

### **Meanings of Difficult Words :**

- **pang** (noun) – sharp pain, ache, hurt; worry/concern, qualm/misgiving.
- **portfolio** (noun) – the position/duties of a minister/secretary of state.
- **disaffection** (noun) – dissatisfaction, disgruntlement, discontent/hostility.
- **unduly** (adverb) – excessively, inordinately, immoderately.
- **vault** (verb) – jump over, leap over, clear/leapfrog/change sides.
- **as if** (phrase) – used to explain how a situation seems to be.
- **defiance** (noun) – non-compliance, disobedience, disregard.
- **at all** (phrase) – under any circumstances, by any means, in any way.
- **bone of contention** (phrase) – matter in question, point at issue, subject.
- **bad blood** (noun) – conflict, fighting, disagreement.

- **resentment** (noun) – bitterness, indignation, enmity, hatred/hate.
- **unlikely** (adjective) – questionable, unconvincing; doubtful, unexpected.
- **ideological** (adjective) – relating to a system of ideas.
- **turn against** (phrasal verb) – set against, cause to dislike, become hostile to.
- **ideology** (noun) – beliefs, ideas/opinions, principles.
- **bound by** (verb) – limit, restrict, restrain.
- **shared** (adjective) – common, mutual.
- **endurance** (noun) – lasting power, durability, permanence, longevity.
- **bicker over** (verb) – argue, squabble, disagree.
- **sway** (noun) – power, domination, control.
- **claimant** (noun) – applicant, candidate, petitioner/appellant.
- **consolidate** (verb) – combine, merge, integrate; strengthen, make stronger, reinforce/fortify.
- **opportunism** (noun) – expediency/exploitation, taking advantage, pragmatism.
- **mobilisation** (noun) – the act of bringing people/resources together for a particular cause.
- **bulwark** (noun) – protector, guard, supporter.
- **potent** (adjective) – powerful, strong, vigorous.
- **adhesive** (noun) – a substance used for sticking things together; fixative, glue, bonding, binder.
- **disarray** (noun) – disorder, confusion, disorganization.
- **populous** (adjective) – densely populated, congested, full.
- **cohort** (noun) – group, generation, category/section.
- **dynast** (noun) – a member of a powerful family, a hereditary ruler.
- **point to** (verb) – indicate, suggest, signal/signify.
- **inherent** (adjective) – basic/fundamental, implicit.
- **contradiction** (noun) – disagreement, opposition, inconsistency.
- **inheritance** (noun) – legacy, heritage, tradition.
- **orientation** (noun) – direction, aim, intention.
- **jarring** (adjective) – clashing/conflicting, contradictory, incongruous; shocking.
- **sustenance** (noun) – means of support, support, maintenance.

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## EVIDENCE OF FRAGILITY

### Underwhelming growth estimates come amid worrying data on agriculture

Five months after Chief Economic Adviser Arvind Subramanian predicted that economic growth was likely to be closer to 6.5% in the current fiscal year, the Central Statistics Office has forecast that the gross domestic product (GDP) would expand at precisely that pace in the 12 months ending in March. The headwinds that had been flagged by Mr. Subramanian at that time are providing to be the crucial factors dampening momentum. For one, gross value added, or GVA which excludes taxes that feature in the GDP number is projected to grow by 6.1%, slowing from a provisional 6.6% in 2016-17, as manufacturing and the agriculture, forestry and fishing components of GVA decelerate. Second, the key investment metric of gross fixed capital formation, though estimated to show faster growth, is expected to shrink in terms of proportion to GDP : to 29%, from 29.5% in the provisional estimates for 2016-17 and 30.9% in 2015-16. With the Index of Industrial Production (IIP) data released in mid-December also reflecting a sharp slowdown over the seven month period from April to October, there are signs that the rebound seen in the second quarter may be far more vulnerable to unravelling than previously considered. With agriculture struggling for traction, despite a 'normal' monsoon, the prospect of private final consumption expenditure regaining vigour in a hurry seems remote, especially since rural

households make a sizeable contribution to aggregate demand. The forecast for consumption spending posit both a slowdown in growth to 6.3% in 2017-18, from 8.7% a year earlier, and a marginal contraction in share of GDP.

That softer growth estimates have come at a time when the government's fiscal deficit has already crossed the budget estimate for the full year, and GST collections are underwhelming, is a particular cause for concern. With Brent crude hovering around \$67 a barrel, oil prices are now well above the \$60-65 range that the Economic Survey had flagged as having the potential to undermine both consumption and public and private investment. Data on kharif food grain production used by the CSO in computing GVA in agriculture, while provisional, project an almost 3% drop in output in 2017-18. This raises the possibility of stronger inflationary pressures on food prices in the coming months. With consumer price inflation having accelerated in November to 4.88%, the fastest pace in 15 months, monetary authorities at the Reserve Bank of India will have little to no leeway to mull interest rate reductions to support growth. On their part, policymakers must bank on building on the measures taken to unclog the credit pipelines, including the recent steps to recapitalise state owned lenders. Other initiatives must include moves to reenergise the export sector: there may be no better time to make the most of the 'fair winds' of a strong global economic rebound that are blowing.

### **Meanings of Difficult Words :**

- **Predict** : (express an outcome in advance): anticipate, call, conclude, envision, forecast, foresee, think
- **Fiscal**: (monetary) budgetary, economic, financial, commercial, pecuniary.
- **Forecast**: (Prediction, often of weather or business) : budget, calculation, estimate, outlook, prognosis, projection, anticipation, augury, cast.
- **Precisely**: (exactly, just): absolute, accurately, as well, correctly, literally, specifically, squarely, strictly
- **Headwind**: (a wind blowing from directly in front, opposing forward motion)
- **Flag**: (decline, fall off): abate, deteriorate, ebb, fade, languish, sag, taper off, wane
- **Crucial**: (critical, important) : central, compelling, deciding, decisive, essential, imperative, momentous, necessary, pivotal, pressing, touchy, urgent, vital.
- **Momentum**: (impetus, push): energy, power, strength, drive, force, impulse.
- **Gross** : (large, fat): great, heavy, hulking, husky, overweight, thick, adipose, big, bulky, dense, fleshy
- **Decelerate** : (slow down): brake, slow
- **Metric** : (rhythmical) (as in condensed): cadent, measured, metrical, rhythmic
- **Shrink** : (become smaller) : decrease, diminish, drop off, dwindle, fall off, lessen, narrow, reduce, shorten, shrivel, wane, weaken, wither
- **Proportion** : (relative amount, size of part to whole) : bulk, capacity, dimension, distribution, fraction, magnitude, percentage, portion, rate, ratio, scale, scope, share, volume.
- **Rebound** : (bounce back; ricochet) : overcome, pickup, revive, backfire, boomerang.

- **Vulnerable\_** : (open to attack) accessible, defenceless, exposed, liable, ready, sensitive, susceptible, unsafe, weak
- **Unravel**: (unfold, solve, untangle): decipher, resolve, solve, undo, untangle, extricate
- **Traction**: (physical resistance, friction) : suction, absorption, adherence, adhesion, constriction, contraction
- **Despite** : (in spite of, regardless of) : against, although, even though, even with, in contempt of in defiance of, in the face of
- **Vigour**: (physical strength and good health): robustness, hardiness, strength, stamina, fitness, toughness, muscle, power.
- **Sizeable**: (huge)(as in astronomical) : colossal, considerable, enormous, gigantic, humongous, monumental, tremendous, vast, whopping, astronomic, epic.
- **Posit** : (suppose): hypothesize, postulate
- **Contraction**: (drawing in; shortening) : decrease, deflation, recession, reduction, shrinkage, abbreviation, confinement, curtailment, elision, receding, reducing.
- **Inflation** : (increase, swelling): boom, expansion, hike, rise, boost, distension, enhancement, enlargement, escalation, extension, prosperity
- **Leeway** : (room to move, grow): extent, headway, latitude, margin, play, scope, space
- **Mull**: (think about seriously): contemplate, deliberate, examine, ponder, weight, chew, consider, delay, linger, wool-gather, revolve.
- **Unclog**: (as in clear, as in unblock): clean, clear away, clarify, eliminate, erase, free, open, ameliorate, brighten, cleanse, meliorate, purify, refine, rid.

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Phrasal Verb	Meaning	Example
<b>Argue down</b>	Beat someone in a debate, discussion or argument.	The teacher tried to ARGUE the girl DOWN, but she couldn't.
<b>Argue down</b>	Persuade someone to drop the price of something they're selling.	She ARGUED him DOWN ten percent.
<b>Argue down</b>	Try to persuade people not to accept a proposition, motion, etc.	They tried to ARGUE DOWN the proposal.
<b>Argue out</b>	Argue about a problem to find a solution.	If we can't ARGUE our differences OUT, we'll have to take them to court.
<b>Ask about</b>	Ask how someone is doing, especially professionally and in terms of health.	He ASKED ABOUT my father.
<b>Ask after</b>	Enquire about someone's health, how life is going.	Jenny rang earlier and ASKED AFTER you, so I told her you were fine.

<b>Ask around</b>	Ask a number of people for information of help.	I have no idea, but I'll ASK AROUND at work and see if anyone can help.
<b>Ask around</b>	Invite someone.	We ASKED them AROUND for dinner.
<b>Ask for</b>	To provoke a negative reaction.	You're ASKING FOR trouble.
<b>Ask for</b>	Request to have or be given.	I ASKED FOR the menu.
<b>Ask in</b>	To invite somebody into your house.	'Jon's at the door.' 'ASK him IN.'
<b>Ask out</b>	To invite someone for a date.	He wanted to ASK her OUT but was too shy.
<b>Ask over</b>	Invite.	They have ASKED us OVER for drinks on Friday.
<b>Ask round</b>	Invite someone.	We ASKED John ROUND for diner.
<b>Auction off</b>	Sell something in an auction.	They AUCTIONED OFF their property as they were heavily in debt.
<b>Back away</b>	Retreat or go backwards.	The crowd BACKED AWAY when the man pulled a knife.
<b>Back down</b>	Retract or withdraw your position or proposal in an argument.	She refused to BACK DOWN and was fired.
<b>Back into</b>	Enter a parking area in reverse gear.	He prefers to BACK his car INTO the garage.
<b>Back off</b>	Retreat.	The police told the protesters to BACK OFF.
<b>Back out</b>	Fail to keep an arrangement or promise.	He BACKED OUT two days before the holiday so we gave the ticket to his sister

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☞“GROWTH IS PAINFUL. CHANGE IS PAINFUL. BUT NOTHING IS AS PAINFUL AS STAYING STUCK SOMEWHERE YOU DON’T BELONG.”☞