Judiciary Cannot Bind President or Governor to Fixed Deadlines

Why is this in the News?

A five-judge Constitution Bench has issued its advisory opinion in the 16th Presidential Reference.
The Court held that:

- Courts cannot mandate rigid timelines for the President or Governors while granting assent to State Bills.
- Courts cannot infer "deemed assent" merely because these authorities do not act within a court-imposed timeframe.
- At the same time, the Bench expressed concern over "undue delays" and "non-responsive conduct" by Governors and the Union Government.

Relevance

GS-2: Polity, Constitution & Governance

- Centre–State relations and federal balance
- Constitutional role and discretion of President and Governors
- Limits of separation of powers
- Judicial review and boundaries of judicial activism
- Interpretation of Articles 200 and 201

GS-2: Executive–Legislature Dynamics

- Effect of delayed assent on State legislative processes

GS-2: Constitutional Bodies

- Advisory jurisdiction of the Supreme Court under Article 143

Constitutional Scheme on Assent

Relevant Articles

Article 200 — Governor may:

- Grant assent
- Withhold assent
- Return the Bill for reconsideration
- Reserve the Bill for the President

Article 201 — President may:

- Grant assent

- Withhold assent
- Return the Bill (except Money Bills)

The Constitution does not specify any mandatory time limit for either office.

Principle of Constitutional Morality

Although no timeline is prescribed, constitutional authorities are expected to act *within a reasonable period* based on constitutional trust.

What Led to the Presidential Reference?

- Rising tensions between Opposition-led State governments and Governors
- Accusations that Governors were intentionally stalling Bills
- Concerns about excessive reservation of Bills for the President
- High Courts, including Madras HC, began hinting at "soft timelines"
- The Union Government sought clarity through a Presidential Reference

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Major Findings of the Supreme Court

A. No hard timelines can be imposed

Court-created deadlines violate the Constitution because:

- They conflict with the separation of powers
- They disregard the constitutionally crafted discretionary space for these offices

B. "Deemed assent" is unconstitutional

- Courts cannot assume assent merely because a timeline was crossed
- Doing so would effectively transfer executive functions to the judiciary

C. Constitutional authorities cannot be inactive indefinitely

The Court condemned Governors and the President for:

- Unexplained delays
- Avoiding decisions
- Using inaction as an indirect veto

It emphasised the duty to record reasons and avoid political motives.

D. Presidential Reference is not an appeal

- The Court clarified that advisory opinions can clarify the law
- They do not operate as appeals against High Court judgments

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Constitutional Foundations

A. Separation of Powers

Case laws referenced: *Kesavananda Bharati*, *Indira Gandhi*, *Puttaswamy*.
Judiciary cannot encroach upon discretionary authority constitutionally vested in executive heads.

B. Federal Structure

- Governor's discretion is circumscribed, not political
- Long delays undermine State autonomy and cooperative federalism
- Cases cited: *S.R. Bommai*, *Nabam Rebia*

C. The "Reasonableness" Test

- No fixed timeline, but the Court stressed "reasonable speed"
- Arbitrary or mala fide inaction is open to judicial review

Key Case Law

- **Nabam Rebia (2016):** Governor cannot interfere in legislative functioning except where Constitution expressly permits
- **Shamsher Singh (1974):** Governor generally acts on aid and advice
- **Rameshwar Prasad (2006):** Discretion is reviewable if tainted by bad faith

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Implications for Centre–State Relations

Positives

- Limits judicial overreach
- Respects the constitutional design of federal checks and balances

Concerns

- Provides room for potential misuse through prolonged delays
- States worry about political use of Governors' inaction

Overall Outcome

A balanced yet status-quo approach:

- No compulsory deadlines
- But strong constitutional censure of undue inaction

Election Data Analysis: From Manual Workflows to the AI Age

Why is this in News?

A recent article examined the dramatic evolution of data journalism in elections—moving from manual scraping in 2017 to full AI-generated scripting during the 2025 Bihar Assembly elections.
The piece marks a technological turning point:

- Entire election-night analysis, maps, charts, and scraping pipelines were produced using AI-written code.
- It highlights how AI transforms newsroom workflows without replacing journalistic reasoning.
- Raises questions around transparency, algorithmic accountability, and election information integrity.

Relevance

GS-2: Governance

- Transparency in election data
- Public access to information
- Technology-enabled accountability

GS-3: Science & Technology

- AI-driven tools for public communication
- Algorithmic systems in data journalism

GS-3: Cybersecurity

- Vulnerability to automated misinformation
- Need for secure and authenticated data pipelines

What is Election Data Analysis?

A systematic process involving:

- Scraping Election Commission data
- Mapping results to constituencies
- Vote share and swing analysis
- Trend identification and projections
- Visual communication

The Pre-2017 "Dark Age"

A. Manual scraping

- Data copied manually from unstable EC websites

- Results trickled in slowly
- Limited technical skills hindered speed

B. Mapping hurdles

- Tools like Google Fusion Tables used
- KML files manually processed
- Printing and digital versions separately prepared

C. Charting was laborious

- Data shuffled across Excel, pivot tables, chart editors
- Heavy dependency on manual effort

2017–2019: "Industrial Tools" Phase

Innovations

- Tableau sped up mapping workflows
- Scripting communities improved efficiency
- Some automation in Google Sheets

Limitations

- Systems were still fragmented
- Human intervention remained central

2019–2024: Industrial Revolution of Data Work

Features

- Higher automation
- Faster pipelines
- Improved real-time analysis

Still needed

- Debugging
- Cross-tool coordination
- Design-level finishing

2025: The AI-Driven Election Room

A. AI-generated scripts

- Google AI Studio produced code for scraping, mapping, and visualization

- JupyterLab executed end-to-end workflows

No requirement for:

- Tableau
- Excel pivots
- Manual mapping tools
- Standalone chart generators

B. Automation expanded to:

- Data ingestion
- Cleaning and transformation
- Visuals
- Live dashboards
- Basic analysis

C. Gains

- Rapid online output
- Automated backend for live coverage
- Record-fast completion for print editions

Why AI didn't replace journalists

Because journalism still needs:

- Interpretation
- Contextual analysis
- Detecting misleading patterns
- Narrative building
- Ethical judgment

Principle:
AI accelerates production; journalists provide meaning.

Broader Impact on Democracy & Media

A. Positive

- Faster information flow
- Richer micro-level insights
- Transparency in trends

B. Risks

- Potential error amplification
- Opaque algorithms
- Higher possibility of misinformation
- Decline in cross-verification

C. Digital Divide

Small newsrooms lacking AI access may be left behind.

Structural Challenges Exposed

A. ECI Website Issues

- Inconsistent formatting
- Difficult to scrape
- Urgent need for open APIs

B. Dependence on external tools

Shift from proprietary systems to AI + open-source reduces dependency.

Future Trajectory

- AI-centric election analysis becomes routine
- Human–AI hybrid workflows strengthen
- Higher demand for data journalists and election technologists
- Possibility of advanced predictive models in India

South Asia's Air Pollution Crisis

Why is this in News?

Severe smog engulfed north India and parts of Pakistan in November 2024—labelled the "2024 India–Pakistan Smog".
Delhi and Lahore recorded hazardous AQI levels, with large "brown clouds" captured in satellite imagery.
The 2025 winter saw similar extreme readings, renewing debates on transboundary pollution and shared airshed governance.

Relevance

GS-1: Geography & Society

- Transboundary atmospheric phenomena
- Urbanisation and pollution patterns

GS-2: Governance

- Inter-agency coordination
- Regional environmental diplomacy
- Institutions like CAQM

GS-3: Environment

- PM2.5 levels, industrial emissions, biomass burning
- WHO AQG 2021, UNEP 2023, Greenpeace reports
- Climate–pollution interactions

What was the 2024 India–Pakistan Smog Event?

A major transboundary pollution episode across:

- Northern and eastern Pakistan
- Delhi NCR, Punjab, Haryana, Uttar Pradesh

Drivers:

- Stagnant winds
- Large-scale stubble burning
- Industrial pollution
- Vehicular emissions
- Winter inversion
  Winds carried pollutants from Pakistan into Indian cities, worsening air quality.

Why is air pollution widespread in South Asia?

A. Meteorological Factors

- Indo-Gangetic Plain is a single airshed
- Winter inversion traps pollutants

B. High Human-Induced Emissions

- Pakistan: burning, industries
- India: vehicles, construction, solid fuel
- Bangladesh: brick kilns
- Nepal: trapped valley pollution

C. Rapid Urbanisation + Weak Regulation

Poor transport systems, unregulated construction, ageing diesel vehicles.

D. Climate Change Feedback

Heatwaves, stagnation, altered wind flows.

E. Fragmented Political Action

No South Asian regional clean-air treaty.

Greenpeace 2023 Report Key Insights

- South Asia is the most polluted region globally
- PM2.5 levels exceed WHO limits manyfold
- Major contributors: industries, vehicles, solid fuel, coal
- Highlights absence of coordinated regional action

Economic Costs for India

A. GDP Losses

- Lancet (2019): 1.36% GDP loss
- Combined health + productivity losses ~3% of GDP
- ~8.5 lakh deaths attributed to pollution annually

B. Lower Labour Output

Especially in outdoor sectors.

C. Healthcare Pressure

Rise in respiratory and cardiac diseases.

D. Investment & Tourism Hit

Pollution deters investors and visitors.

E. Agricultural Impact

- Dimming reduces crop yields
- Ozone harms key cereals

Way Forward

A. Regional Airshed Management

A South Asian-level clean air framework, akin to ASEAN's haze agreement.

B. Strong Domestic Action

Move from crisis-driven responses to long-term emission reduction.

C. Sectoral Fixes

- Crop diversification
- EV expansion
- Urban green planning
- Coal phase-down

D. Monitoring & Data

A unified South Asian AQI portal.

E. Political Commitment

Prioritising public health and environmental justice.

Over Half of Juvenile Cases Pending Before JJBs: India Justice Report

Why is this in News?

A special India Justice Report study—India's first empirical review of Juvenile Justice Boards—found alarming levels of pendency (55%), widespread vacancies, and inadequate institutional capacity despite the JJ Act, 2015 being in force for a decade.

Justice Madan B. Lokur described the findings as "deeply troubling".

Relevance

GS-2: Governance & Vulnerable Groups

- Child protection systems
- Rights of children in conflict with law

GS-2: Judiciary

- Pendency, systemic delays
- Functioning of quasi-judicial bodies

What are JJBs?

Established under JJ Act, 2015 to adjudicate cases involving Children in Conflict with Law.
Composition:

- One First-Class Judicial Magistrate
- Two Social Workers (one must be a woman)

Mandate:

- Child-friendly proceedings

- Emphasis on rehabilitation
- Preferably resolve cases within 4 months

Key Findings of IJR 2023

1. Pendency

- 55% of 1,00,904 cases pending
- Odisha worst (83%), Karnataka best (35%)
- Average: 154 pending cases per JJB

2. Human Resource Gaps

- 24% JJBs not fully constituted
- Acute staffing shortages in CCIs
- 30% lack Legal Services Clinics

3. Weak Data Ecosystem

No centralised digital platform (unlike NJDG).

RTI findings:

- 11% rejected
- 24% unanswered
- 29% redirected
- Only 36% produced usable data

4. Coordination Failures

Poor linkage among:

- Police
- DCPUs
- CCIs
- CWCs

Delays in Social Investigation Reports and counselling.

Why the System is Collapsing

- Inadequate funding
- High turnover of social workers
- Weak monitoring by State Protection Societies
- Policing-driven mindset

- Insufficient infrastructure and digital records

Impact

- Violates Article 21 rights of children
- Education and rehabilitation suffer
- Longer detention increases trauma and risk of reoffending
- Over-institutionalisation

Way Ahead

- Fill vacancies and build a trained cadre
- Develop a national JJB data grid
- Performance audits
- Improve funding and mental health services in CCIs
- Mandatory training for JJB members
- Strengthen coordination mechanisms

India-Born Cheetah 'Mukhi' Gives Birth to Five Cubs — Project Cheetah Milestone

Why is this in News?

Mukhi, the first cheetah born in India after reintroduction, has delivered five cubs at Kuno National Park.
This marks the first second-generation birth in India since reintroduction—bringing the total population to 32, including 21 India-born individuals.

The Environment Ministry termed it a critical breakthrough.

Relevance

GS-3: Environment & Biodiversity

- Reintroduction ecology
- Species recovery

GS-3: Conservation Governance

- NTCA and scientific protocol-driven rewilding

GS-3: Science & Technology

- Radio-collaring, ecological modelling

Project Cheetah Overview

Initiated in 2022 to reintroduce cheetahs from Namibia and South Africa.
Goals:

- Establish genetically robust meta-populations
- Restore open forest–savannah ecosystems
  Managed by NTCA, WII, and State Forest Departments.

Why Mukhi's Birth Matters

A. First F1 cheetah to reproduce in the wild

Clear evidence of successful biological integration.

B. Validates habitat suitability

Indicates:

- Adequate prey
- Tolerable predator competition
- Healthy adaptation

C. Mukhi overcame early challenges

She was:

- Born to Jwala (Namibian cheetah)
- Abandoned at birth
- Hand-raised
- Later successfully rewilded

Population Status

- Total: 32
- 29 in Kuno, 3 in Gandhi Sagar
- 21 India-born → emerging second generation

Scientific & Conservation Significance

A. Genetic resilience

Second-generation births reduce founder-effect risks.

B. Behavioural competence

Indicates:

- Hunting skills
- Reproductive success
- Site fidelity

C. Ecological restoration

Marks return of cheetahs after 70+ years.

Challenges

- Deaths of several imported cheetahs
- Limited carrying capacity of Kuno
- Need for additional landscapes
- Radio-collar issues
- Conflict risks

Way Ahead

- Expand to other sites (Nauradehi, Gandhi Sagar, Mukundra)
- Enhance veterinary and monitoring capacities
- Strengthen prey base
- Genetic monitoring
- Community-based conflict mitigation

Indigenous Gene Editing Tool Birsa-101

Why is this in News?

CSIR-IGIB has created India's first fully indigenous CRISPR-Cas9 gene-editing platform.
The technology, transferred to Serum Institute for advanced trials, has been used to develop Birsa-101—a curative gene therapy for sickle cell disease (SCD).
This Indian therapy is expected to be far cheaper than the $2.2 million US therapy Casgevy.

Relevance

GS-2: Health & Policy

- National SCD elimination strategy
- Tribal health governance

GS-3: Science & Technology

- Biotechnology

- Gene editing ethics

GS-1: Society

- Vulnerabilities in tribal populations

What is Sickle Cell Disease?

A genetic disorder caused by a mutation in the HBB gene.
Results in:

- Deformed RBCs
- Blocked blood flow
- Pain episodes
- Anaemia, organ damage, stroke

High prevalence in tribal regions of MP, Odisha, Gujarat, Maharashtra, Chhattisgarh, Jharkhand.

CRISPR-Cas9 Basics

- Acts as molecular scissors
- Cuts DNA at specific sites
- Enables rewriting defective genes

IGIB developed an indigenous Cas9 variant (2016) with:

- Reduced off-target effects
- Full IP ownership
- Suitability for therapeutic use

Birsa-101 Therapy

Mechanism

- Corrects the original HBB mutation
- Edited stem cells infused into patient
- Leads to production of healthy haemoglobin

Comparison with Casgevy

Feature	Birsa-101	Casgevy
Strategy	Gene correction	HbF upregulation

Feature	Birsa-101	Casgevy
Cost	Fraction of $2.2M	$2.2M
IP	Fully Indian	Licensed tech
Longevity	Potential cure	Functional cure

Why this is a Landmark

A. Fully Indian R&D

- All technology and patents owned domestically
- Enables affordable therapies

B. Major Public Health Impact

- High incidence of SCD in tribal belts
- Supports national elimination mission

C. Global Scientific Standing

India now possesses:

- Its own Cas9
- Clinical-grade manufacturing
- Capacity for gene therapy trials

D. Improved Safety

Reduced risk of unintended mutations.

Next Steps

- Phase I at AIIMS Delhi
- Phase II–III with Serum Institute
- National regulatory review
- Integration into SCD programme

Broad Significance

- Opens pathways for gene therapies for thalassemia, DMD, Gaucher's
- Advances India's biotechnology sovereignty

Challenges

- Long-term safety tracking
- Ensuring affordability
- Ethical oversight
- Need for counselling and testing infrastructure

Mount Semeru Eruption

Why is this in News?

Mount Semeru in Java—one of Indonesia's most active volcanoes—erupted again, ejecting ash, pyroclastic flows, and volcanic debris.
The event renewed concerns over Indonesia's volcanic hazards due to its location on the Pacific Ring of Fire.

Relevance

GS-1: Geography

- Volcanism
- Plate tectonics

GS-3: Disaster Management

- Hazard mitigation
- Early warning systems

How Volcanoes Erupt

- Mantle heat melts rocks into magma
- Magma rises due to lower density
- Accumulates in chambers
- Pressure builds
- When rock cannot contain it, magma escapes
- Once at surface, it becomes lava

What Determines Explosiveness?

A. Low-viscosity magma → Gentle eruptions

- Basaltic
- Low silica
- Gases escape easily

- Produces lava flows

B. High-viscosity magma → Explosive eruptions

- Andesitic or rhyolitic
- High silica
- Traps gases
- Sudden release causes explosive events

Why Semeru's Eruptions Are Violent

- High-silica, sticky magma
- Conduit traps gases
- Located on a subduction zone (Indo-Australian plate descending under Eurasian plate)

Produces:

- Pyroclastic flows
- Thick ash clouds
- Lahars

Indonesia's High Volcanic Risk

- 120 active volcanoes
- Dense populations near volcanic slopes
- Subduction-driven magma supply
- Repeated eruptions due to tectonic activity

Overview

A. Causes

- Mantle convection
- Pressure buildup
- Tectonic fractures

B. Types of Eruptions

- Effusive
- Explosive
- Water-induced phreatomagmatic

C. Hazards

- Pyroclastic flows
- Ash disruption
- Mudflows
- Climate effects

D. Why eruptions recur

- Constant magma recharge
- Weak volcanic conduits
- Subduction zone activity

22nd November Daily MCQs

Q1.

With reference to the Supreme Court's recent opinion on the 16th Presidential Reference regarding assent to State Bills, consider the following statements:

1. The Supreme Court held that courts can prescribe a uniform outer time-limit within which Governors must act on Bills, failing which "deemed assent" will operate.
2. The Court observed that prolonged inaction by constitutional heads like Governors or the President may be subject to judicial review if it is arbitrary or mala fide.
3. The Court's reasoning was anchored in the doctrine of separation of powers as part of the basic structure of the Constitution.

Which of the statements given above is/are correct?

a) 2 only
b) 3 only
c) 2 and 3 only
d) 1, 2 and 3

Correct Answer: c) 2 and 3 only

Explanation:

- **Statement 1 is incorrect.** The Court explicitly held that the judiciary **cannot** impose fixed timelines or presume "deemed assent" after a deadline, as this would amount to the judiciary usurping executive functions and altering the constitutional design.
- **Statement 2 is correct.** The Court strongly criticised "prolonged and evasive inaction" and indicated that such inaction is open to scrutiny when it becomes arbitrary or politically motivated.
- **Statement 3 is correct.** The Court invoked **separation of powers**, a basic structure element, to underline why courts cannot intrude into the discretionary space explicitly given to constitutional heads under Articles 200–201.

Q2.

In the context of the increasing use of Artificial Intelligence (AI) in election data analysis and newsroom workflows, consider the following statements:

1. AI tools can now generate end-to-end scripts for scraping election results, cleaning data, producing maps, and creating visualisations without human intervention.
2. AI has completely replaced the need for human journalists in interpreting electoral trends and writing analytical pieces.
3. The extensive use of AI in election data workflows raises concerns about algorithmic transparency and the rapid spread of automated misinformation.

Which of the statements given above is/are correct?

a) 1 only
b) 2 and 3 only
c) 1 and 3 only
d) 1, 2 and 3

Correct Answer: c) 1 and 3 only

Explanation:

- **Statement 1 is correct.** In the 2025 Bihar Assembly election coverage, AI-generated code was used to automate scraping, mapping, charting, and statistical summaries from end to end.
- **Statement 2 is incorrect.** AI has *not* replaced journalists; humans remain essential for interpretation, context, detecting misleading patterns, and exercising editorial judgement.
- **Statement 3 is correct.** AI-heavy workflows raise issues like lack of auditability of code, error amplification, and potential misuse for visual or data-based misinformation.

Q3.

With reference to the air pollution crisis in South Asia, particularly the "2024 India–Pakistan Smog", consider the following statements:

1. The Indo-Gangetic Plain largely behaves as a single airshed, where meteorological conditions allow pollutants to accumulate and travel across national boundaries.
2. According to recent assessments, PM2.5 levels in many South Asian cities exceed WHO air quality guidelines by 7–10 times.
3. A formal, binding regional treaty for transboundary air pollution control, on the lines of the ASEAN Transboundary Haze Agreement, is already in force in South Asia.

Which of the statements given above is/are correct?

a) 1 and 2 only
b) 2 only
c) 1 and 3 only
d) 1, 2 and 3

Correct Answer: a) 1 and 2 only

Explanation:

- **Statement 1 is correct.** The Indo-Gangetic Plain acts as a single **airshed**, and winter inversion, low wind speeds, and high emissions allow pollutants to spread across India, Pakistan, and other neighbours.
- **Statement 2 is correct.** Reports like Greenpeace 2023 describe South Asia as the most polluted region globally, with PM2.5 levels multiple times (often 7–10 times) WHO standards.
- **Statement 3 is incorrect.** One of the central criticisms is precisely that **no formal regional clean-air treaty** exists in South Asia despite the shared airshed.

Q4.

With reference to the functioning of Juvenile Justice Boards (JJBs) as highlighted in the recent India Justice Report, consider the following statements:

1. JJBs are mandated under the Juvenile Justice (Care and Protection of Children) Act, 2015 to deal with cases involving Children in Conflict with Law.
2. Each JJB must mandatorily consist of two Judicial Magistrates of the First Class and one social worker.
3. A significant proportion of JJBs across India are not fully constituted, and more than half of the cases before them remain pending.
4. The absence of a centralised, NJDG-like data platform for JJBs contributes to poor transparency and weak monitoring.

How many of the statements given above are correct?

a) Only one
b) Only two
c) Only three
d) All four

Correct Answer: c) Only three

Explanation:

- **Statement 1 is correct.** JJBs are statutory bodies under the JJ Act, 2015 for handling Children in Conflict with Law.
- **Statement 2 is incorrect.** The composition is **one** First-Class Judicial Magistrate and **two social workers** (with at least one woman), not two magistrates.
- **Statement 3 is correct.** The India Justice Report notes about **55% pendency** and that around **24% JJBs are not fully constituted**.

- **Statement 4 is correct.** There is no NJDG-like central data system for JJBs, and RTI data show fragmented and often inaccessible information.

Hence, **three** statements (1, 3, and 4) are correct.

Q5.

With reference to the indigenous gene therapy **Birsa-101** and India's CRISPR-based gene editing efforts, consider the following statements:

1. Birsa-101 aims to cure sickle cell disease by directly correcting the underlying mutation in the HBB gene in a patient's stem cells.
2. IGIB's indigenous Cas9 variant helps India avoid dependence on foreign intellectual property for gene editing–based therapies.
3. The US-approved therapy Casgevy uses the same strategy as Birsa-101 by correcting the original mutation in the HBB gene.
4. Birsa-101 is especially relevant for India because sickle cell disease is highly concentrated in several tribal belts of central and western India.

Which of the statements given above is/are correct?

a) 1 and 2 only
b) 1, 2 and 4 only
c) 3 and 4 only
d) 1, 2, 3 and 4

Correct Answer: b) 1, 2 and 4 only

Explanation:

- **Statement 1 is correct.** Birsa-101 is designed to **correct the specific HBB mutation**, making it a potentially curative therapy.
- **Statement 2 is correct.** IGIB engineered its own Cas9, giving India strategic control over IP and reducing costs.
- **Statement 3 is incorrect.** Casgevy does **not** correct the original mutation; it increases fetal haemoglobin (HbF) to bypass the defect.
- **Statement 4 is correct.** Sickle cell disease disproportionately affects tribal communities in states such as MP, Chhattisgarh, Jharkhand, Odisha, Maharashtra, and Gujarat, making a low-cost, indigenous therapy crucial.

Mains: Although the Constitution prescribes no timelines for the President or Governors to act on State Bills, the principle of 'constitutional morality' demands timely decision-making. Critically examine how prolonged inaction affects State autonomy, legislative functioning, and cooperative federalism. 250 words.