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## **SCIENCE AND TECH**



### WHY DOES IT MATTER?

Isa Zambrano, Colombia

Normal matter, dark matter and dark energy. The universe summed up in a few words? This would be it.

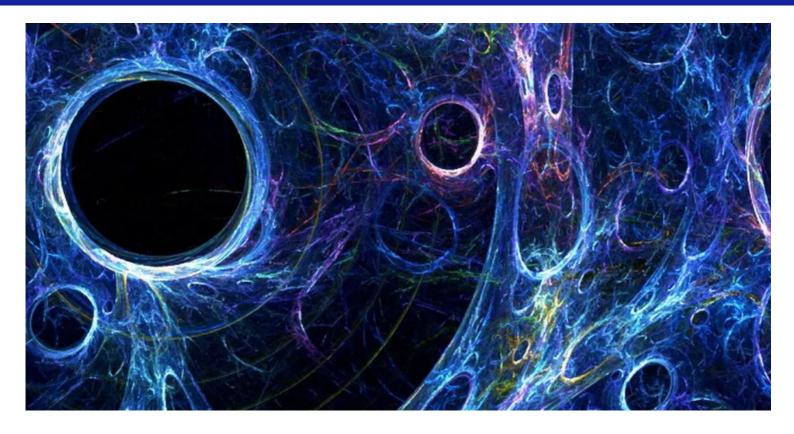
Last week, as I was sifting through Instagram, I caught sight of "The Pillars of Creation," an astounding pic taken by the Hubble Space Telescope in early 1995. Stars sprinkled over the darkness in scattered harmony. A nebula — the ancient whisper of someone, imprinted, soundless in the fabric of space. Darkness. So much darkness. So much more than we could imagine. It got me thinking—got me asking: what is our universe truly made out of?

Welcome to the newsletter's science and tech column, where we talk about all things tech, space, and those questionable science threads you find on Reddit. In this article, I'll take you on a trip through the cosmos to explain "matter." Heads up: this time, it just might surprise you. So, pay attention, buckle up, and prepare for the ride. Let's hope you don't get swallowed up by a black hole.

To go up to the cosmos, you at least need some stairs. So let's start small (really, really small) with normal matter. Atoms are the basic building blocks of everything you see — from stars to planets to you. Right here: "." in this single period, you're looking at a billion billion atoms.

But here's where the trick comes in: if normal matter is everything you and I see, then is it everything?

As astronomers explored the universe, they found more and more how normal matter explained less and less of the universe.



So, over time, they came to support the "Concordance Model," which established that 25% of the universe is made up of dark matter, 70% is made up of dark energy, and 5% is made up of normal matter. So, truly, we can't see it all.

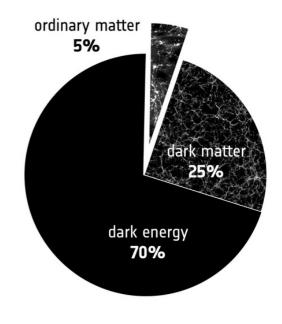
Parties... They say that during them, things happen. Dark matter is likely the most constructive of these. So, let's continue on our trip through the cosmos by breaking it down.

Music. Flickering lights. It's your best friend's "Quinceañera," and as the beat drops, the dance floor is flooded with silver balloons. You can see, touch, and smell them as they enter — a floating procession. So, let's call the balloons "normal matter."

As you move through the room, you feel resistance in the air, noticing the balloons wobbling from side to side, even though no one is touching them. In this way, the air is kind of like dark matter: an unseen force that affects how things move and behave, even if not seen directly.

So, why exactly is dark matter invisible? Well, it doesn't emit, absorb, or reflect light, making it undetectable by electromagnetic radiation. Moreover, we know it exists because of its gravitational effects on visible matter, planets, and galaxies.

Dark energy is even more mysterious. Prior to its discovery, scientists had always assumed that the rate of expansion of the universe would slow down over time due to the attractive force of gravity. But when testing this notion, they found the opposite to be true: the universe was growing, and its rate of expansion was, too!





Scientists theorized that this acceleration was driven by a repulsive force resulting from quantum fluctuations or small, random energy changes in our universe's "empty" space. They called this force dark energy, and its discovery in the 1990s completely shocked them.

Unsurprisingly enough, many, many years earlier, Albert Einstein predicted the existence of dark energy, with his theory of the cosmological constant, a type of mathematical band-aid that made the numbers in his theory of general relativity, "work". This theory established that the "constant" would take the shape of a repulsive force that would counteract gravity, keeping the universe from collapsing in on itself. A repulsive force that would later come to be known as "dark energy."

Now, loosen your seat belts, and together, let's take a step back. Why, again, is any of this important? Think about all the futuristic movies you've seen, with cars and bots and luminous cities that float — capitalist heavens on Earth. A deeper understanding of dark matter, dark energy, and the quantum forces that direct our universe could help us get closer to technologies we thought we'd only ever see on screen. Some examples: Advanced propulsion systems (think faster, cooler rockets), gravitational manipulation technologies (think warp devices, which would allow faster-than-light travel), and improved quantum technologies (think more efficient atomic clocks).

Just as dark energy and dark matter take up 70% and 25% of the cosmos respectively, they remain one of the biggest mysteries of our universe to this day. Luckily, minds are the engines of discovery. And questions: their vehicle. Looking into the future, scientists will continue to explore these big questions and collaborate with others to find even greater answers. Your mission? Keep learning, keep reading and keep looking up at the stars, in full-hearted wonder. We'll see you again very, very soon.



### **JOBS OF THE FUTURE AND AI**

Leonardo Gabrielli, Italy

For centuries, people's lives have been shocked by astounding innovations and unveilings, and for a few years, we have been increasingly viewing a process of unprecedented evolution. One of the most noted developments is "Artificial Intelligence", whose history began in 1951 when Christopher Strachey wrote the earliest successful Al program.

With the advent of AI and the first robots, we were able to accelerate the stages of scientific discovery. Indeed these advanced technologies are used to design new materials with features that make them more resilient and resolute. Furthermore, AI algorithms are engaged to administer a Tokamak simulator, an experimental reactor used to reproduce nuclear fusion in France. It is employed to lower the risk of human errors and in order to make the reactor safer. For many, though, the employment of AI and robots will gradually exempt humans from the most repetitive, dangerous, and laborious tasks such as construction work or monotonous office jobs. As a consequence, the world will soon be plagued, or blessed, with a towering unemployment rate.

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Representative of Innovation Centre. "What Effects Will AI Have on Jobs and on Our Future."

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Α the representative of "Innovation Centre" of a wellknown Italian bank stated, "We must prepare the world for what will be the next Industrial Revolution before it is too late to stave off massive employment losses. On the other hand, AI will never substitute humankind for the creative part of duties and crucially more it lacks our everyday morality. Moreover, humans are the ones who must consider Al's "cost function", or a measure of how close algorithm is to reality.





Indeed a computer will not have the ethics to choose if a man should live or die, accordingly, it will follow the code given by programmers. Subsequently, we should be very conscious of what information we are giving to these modernizations, and avoid "Bias", most commonly known as "AI reading error". We must get ready for the next stage of evolution before we are entirely hit."

In summary, we should warn the global population about an imminent metamorphosis that we are going to encounter before it is too late and prepare it to adapt to these looming changes.



## **GEOPOLITICS**



## WHY NOW? THE HISTORY BEHIND THE ISRAELI-PALESTINIAN CONFLICT

Paulina Martinez, Colombia

#### **War History**

In 1917, the British government issued the Balfour Declaration, which announced Britain's promise of a "national home for the Jewish people in Palestine" under Ottoman rule. The promise appeared the Zionist movement, who believed in the Jewish right to the land of Jerusalem, also recognized as Zion.

Following the end of World War I, the Palestine region was seized from the Ottoman Empire by the British and placed under their influence via a mandate from the League of Nations. Even though said declaration and following actions were criticized for neglecting the necessities and desires of Palestinians who strived for independence, Britain's promise and Nazi persecution throughout the Holocaust in the Second World War led numerous Jewish civilians to migrate to Palestine into the 1920s and 1930s. These events generated clashes and disagreements among Palestinian Arabs and Jewish migrants, resulting in hundreds of deaths.

Amid such misfortunes, the United Nations adopted a resolution to split the area into two independent states, a "Jewish State" and an "Arab State" with Jerusalem under U.N. trusteeship, despite opposition from Palestinian Arabs of the region. Palestinians refused to recognize the resolution, intensifying the conflict between the two factions, and on May 15, 1948, Israel declared independence, thus sparking the Israeli-Arab War.



Over the years, multiple minor conflicts occurred between Palestine and Israel, such as the Six-Day War, which forcibly displaced innumerable people, who became refugees, as Israel began occupying Palestinian territories. In 1987, after several decades, Palestinian forces ultimately arose in their struggle for a Palestinian state. Hence, Hamas began actively engaging in combat with Israel. Their continuous fights and military operations in 2008, 2012, and 2014, among others, produced countless fatalities.



#### What Is Hamas?

Hamas was assembled in 1987 at the initiation of the first Palestinian uprising, or intifada, against Israel. It is an offshoot of the Muslim Brotherhood, a transnational Sunni Islamist group originating in Egypt. In particular, the word itself, Hamas, is an Arabic acronym signifying "Islamic Resistance Movement." Assimilating to most Palestinian factions and political parties, this group aspires to create an absolute Palestinian state, insisting that Israel is an occupying power and trying to liberate Palestinian territories. As a result, it considers Israel an illegitimate state, rejecting any peace deal with the country, for it refuses to recognize it.

The Islamist militant group has been designated as a terrorist organization by Israel, the United States of America, the European Union, and several Western nations. Moreover, the U.S. State Department affirms Iran and other Gulf Arab countries provide money and weapons to Hamas. As commented by Secretary of State Antony Blinken at a press conference in Israel on Thursday, October 12: "Hamas has only one agenda, to destroy Israel and to murder Jews."

## Current Attacks in the Israeli-Palestinian Conflict 2023

As for the specific timing of the attack, Hamas capitalized on a deeply distracted Israeli government. They were not focused on how to address the Hamas threat and Iran," as a former Israeli deputy national security advisor, Chuck Frielich, commented. Thus, the Islamic Resistance Movement further weakened Israel at one of its most historically arduous moments of anxiety regarding societal cohesion and military preparation.

Hamas denominated its action "Operation Al-Aqsa Flood," stressing one of the primary causes behind the attacks: Israeli acts of desecration of a holy Islamic state. Furthermore, additional motivating factors concern the increasing tendency of Arab states to establish peace agreements with Israel, as evidenced by the 2020 Abraham Accords involving the United Arab Emirates, Bahrain, Sudan, Morocco, and Saudi Arabia. Another timing aspect is that it coincides almost precisely with the 50th anniversary of the initiation of the Yom Kippur or Ramadan War in October 1953, when Egypt and Syria attacked Israel together; the significance of a Palestinian entity being capable of surprising Israel in a similar manner would not be lost on Hamas.

Nowadays, the terrorist military incursion against Israelis has killed at least 1,200 individuals and injured 2,900 others, as specified by Israeli authorities.



Hamas fired numerous rockets, and an estimated 1,000 fighters crossed into Israel from its neighboring Gaza Strip. Israeli officials have claimed that 130 civilians and soldiers are currently hostages. The planning for this operation is said to have lasted between multiple months and two years, and the result, the first attack, was unprecedented, thus taking Israel by surprise.

Consequently, Israeli forces have responded, declaring "a state of alert for war" and launching hundreds of retaliatory airstrikes on Gaza, injuring and taking the life of more than 6,000 Palestinians. The previous attacks have launched renewed attention on the region's conflict, prompting protests around the globe.



## THE POWER OF FISCAL STIMULUS: DRIVING ECONOMIC RECOVERY IN A POST-COVID WORLD

Carlos A. Ibarra, Colombia



As the world continues to grapple with the economic fallout of the COVID-19 pandemic, governments have turned to fiscal stimulus as a powerful tool to revive their economies. Fiscal stimulus, in the form of increased government spending and tax cuts, has proven to be instrumental in jumpstarting economic growth, creating jobs, and restoring consumer and business confidence. In this article, we will delve into the vital role of fiscal stimulus in the post-COVID world and explore its impact on various economies.

#### The Global Landscape of Fiscal Rescue and Recovery Spending

Governments worldwide have committed trillions of dollars to fiscal rescue and recovery spending in response to the COVID-19 crisis. According to a recent analysis, the ten key emitters and 16 Member States of the European Union have jointly pledged approximately USD 11.1 trillion in fiscal rescue and recovery spending as of May 2021. Out of this staggering amount, around USD 3 trillion can be identified as fiscal spending with potential greenhouse gas (GHG) emissions impacts. The remaining USD 8.1 trillion represents neutral fiscal spending with no potential impact on GHG emissions.

It is worth noting that a significant portion of the fiscal rescue and recovery spending remains to be seen due to a lack of detailed information. Across all countries, almost USD 1.2 trillion, accounting for 40% of all fiscal spending with potential impact, falls under this category. For example, the lack of granularity in China's 2021 Government Work Report contributes to the uncertainty in spending breakdown. This lack of transparency poses challenges for tracking and assessing the environmental implications of fiscal measures.

#### The Greenness of Fiscal Spending

When analyzing the level greenness across key emitters' fiscal spending, it becomes evident that a substantial portion of the expenditure is allocated to measures that support the status quo. On average, 35% of budgetary rescue and recovery spending in all countries is dedicated to such measures, although this percentage can reach up to 73% for individual countries. These measures often include liquidity support for large corporations or general value-added tax (VAT) reductions without specific conditions for a net-zero transition.

However, there is a silver lining. A significant share of fiscal rescue and recovery spending can be classified as low-carbon measures.

Approximately USD 641 billion, accounting for 22% of all spending with potential GHG emissions impact, falls under this category. This finding aligns with previous estimates that around 18% of recovery spending of the 50 largest economies could be considered low-carbon. Notably, the U.K., South Korea, Japan, India, and the 16 E.U. Member States stand out with higher shares of low-carbon spending, with 30% or more allocated to low-carbon measures.

On the other end of the spectrum, high-carbon spending represents a smaller portion of the total fiscal rescue and recovery spending. Approximately USD 105 billion, or 4% of all spending, is allocated to high-carbon measures across all countries. India, Saudi Arabia, and Indonesia have allocated the highest shares of their domestic spending to high-carbon measures.







#### **Emissions Impact of Fiscal Spending**

Regarding the impact of fiscal rescue and recovery spending on emissions, it is essential to categorize the measures based on their likely expected effect on GHG emissions. The analysis reveals that a significant portion of the identified low-carbon spending is enabling and catalytic rather than directly leading to emissions reductions in the short term; this implies that the emission reduction impact in low-carbon expenditures will likely unfold over a longer time horizon towards 2030 and beyond.

Out of the total low-carbon spending, approximately 36% can be considered direct low-carbon measures, representing around USD 230 billion. The remaining 64% is allocated to enabling and catalytic low-carbon measures. The United States, China, and South Africa are notable exceptions, with higher proportions of their low-carbon spending dedicated to direct measures.

In contrast, high-carbon spending is primarily directed towards enabling measures, constituting 58% of all high-carbon spending. Direct high-carbon measures account for the remaining 42%, representing USD 43 billion. The United Kingdom, Japan, and Brazil are countries that have allocated all or most of their high-carbon spending to direct measures.







#### **Policy Implications of the Findings**

Analyzing fiscal stimulus measures and their impact on emissions has significant policy implications. While governments have committed substantial funds to fiscal rescue and recovery spending, there is a need for greater alignment with the goals of the Paris Agreement. Only 22% of all spending with potential GHG emissions impact can be classified as low-carbon; this suggests that governments still need to fully utilize the opportunity to focus economic recovery measures on low-carbon activities.

However, there is a positive aspect to consider. The share of explicitly low-carbon spending outweighs high-carbon spending by approximately five to one ratio, highlighting the potential for governments to increase the proportion of low-carbon spending compared to high-carbon spending, aligning their investments with the goals of the Paris Agreement. Repurposing committed funding to low-carbon activities could be a viable option for governments to steer their fiscal spending in a more environmentally friendly direction.



Acknowledging the role of enabling and catalytic measures in the low-carbon spending landscape is also essential. While these measures may not lead to immediate emissions reductions, they play a crucial role in supporting the implementation of direct low-carbon measures over a longer time horizon; this underscores the need for sustained commitment and further action to achieve substantial emission reductions globally by 2030.

#### **Limitations and Future Research**

The analysis of fiscal stimulus measures faces several methodological limitations that warrant further research. First, the classification of actions based on their greenness and emissions impact relies on available data and measure archetypes, which may not capture the full complexity of each measure's impact. Future research should develop a more comprehensive framework that considers country-specific contexts and barriers to accurately assess emissions' impact on fiscal spending.

Furthermore, the lack of detailed information and the ambiguity surrounding the timeframe and total committed amounts for many measures pose challenges in analyzing the true impact of fiscal rescue and recovery spending. Future research should enhance data collection and harmonization accuracy to better understand the relationship between fiscal spending and emission reduction.

In conclusion, fiscal stimulus has emerged as a vital tool for driving economic recovery in a post-COVID world. Governments worldwide have committed trillions of dollars to fiscal rescue and recovery spending, with varying degrees of greenness and emissions impact. While there is room for improvement in aligning spending with the goals of the Paris Agreement, the substantial share in low-carbon expenditures indicates a positive trend toward a greener recovery. As we navigate the complexities of the post-pandemic economic landscape, fiscal stimulus will continue to play a crucial role in shaping a sustainable and resilient future.





### **BRICS**

Matteo del Franco, Italy

The end of World War II saw the United States, the Soviet Union, the United Kingdom, Canada, and France emerge as the main victors, and the subsequent Cold War marked a clear triumph of the Atlantic bloc, which includes North America and Western Europe, over Russia. After these two conflicts, global governance has always been in the hands of the Americans, but in recent years, it may have been called into question.

The term "BRIC" was first used by the Chairman of Goldman Sachs Asset Management, Jim O'Neill, who argued that participation in the G7 should be limited to the United States, the United Kingdom, and one European country, leaving most seats for the new emerging economies of Brazil, Russia, India, and China.



It all began when some quickly developing economies like China, India, Brazil, and Russia wanted to be recognized with greater prominence in international institutions because their geopolitical weight was growing. Since these nations were not being adequately considered within international institutions, in 2006, Russian Foreign Minister Lavrov, on the sidelines of the United Nations assembly in New York, brought the four countries to the table, thereby initiating a cooperation.

After several meetings among the four countries, the first "BRIC summit" was held in Ekaterinburg, Russia, on June 16, 2009, sending a clear signal to the world of a weakening of the previously unquestioned U.S. hegemony, especially following the crises of the previous year: the 2008 economic crisis and the conflict in Georgia in the same year. In 2010, the group initiated the process of South Africa's accession at the invitation of China, which would be formalized within the next year, adding the "S" "BRICS." to the acronym, becoming Furthermore, in 2011, BRIC countries demonstrated unity by abstaining from the UN Resolution 1973 vote regarding a "no-fly zone" over Libya.

A significant turning point was reached at the 2013 summit in Durban, South Africa, during which the project to create an international bank was launched.

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https://leg16.camera.it/465? area=2&tema=760&BRICS+ %28Brasile%2C+Russia%2C +India%2C+Cina+e+Sudafric a%29

**BRICS** 

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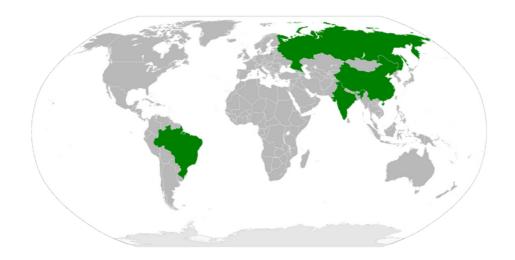




This bank would not rely on the dollar as its main currency for the economic development of these and other emerging countries, eliminating the need to engage with the World Bank or the International Monetary Fund. Thus, the New Development Bank was established in 2014. Despite Russia's invasion of Crimea, the BRICS maintained a fairly unified position by abstaining from the UN vote condemning Russia's invasion. This may be open to interpretation, but it shows that these countries had the intention to continue on the path of alliance and mutual support.

In recent months, we have heard about BRICS because, starting from January 1, 2024, the group of six countries will expand to twelve with the addition of Argentina, Ethiopia, Egypt, Iran, Saudi Arabia, and the United Arab Emirates. The expanded group will encompass 46.5% of the world's population, 36% of the global GDP, and 45% of global oil production. Additionally, they will have a bank that financed projects worth 15 billion in 2021, as opposed, though, to the World Bank's 60 billion.

Despite the exponential growth in recent years, there are several doubts regarding BRICS as an international power capable of establishing a new world order. Firstly, there are no solid treaties that bind BRICS into an international organization like the EU or NATO. What unites these states is their common resentment and disdain for the balance established by the United States and Europe, rather than centuries of culture and exchanges between peoples, as in the Atlantic bloc.



Additionally, each of these states pursues its national interests, which could lead to inconsistencies or conflicts in the long-term. For instance, India is part of the Quad agreement, which explicitly aims to contain Chinese expansion.

Furthermore, the various countries are grappling with different internal issues. Russia faces heavy sanctions due to the war in Ukraine, the collapse of commodity prices has had a decisive impact on many BRICS economies, in addition, some of these states have experienced political crises. The first setback occurred in Brazil and ended with the impeachment of President Dilma Rousseff as a result of the Lava Jato investigation. The second took place in South Africa, where corruption was rampant, culminating in the arrest of then-President Jacob Zuma.

In conclusion, the exponential growth of BRICS countries can be questioned from various perspectives, especially given that the leading economy of the organization, China, is facing internal problems, and growth rates are slowly declining. It is also important to consider the various interests of these states and the lack of well-defined parameters regarding the goals and structure of BRICS. Currently, the organization is primarily economic and lacks an international military structure, like NATO, to support it. However, the recent expansion and the statistics related to the GDP and population of these states should not be underestimated and could potentially lead to the establishment of a new world order.



# 2023 SUMMER RECAP: 5 KEY THINGS YOU NEED TO KNOW ABOUT

Prishaa Shrimali, U.S.

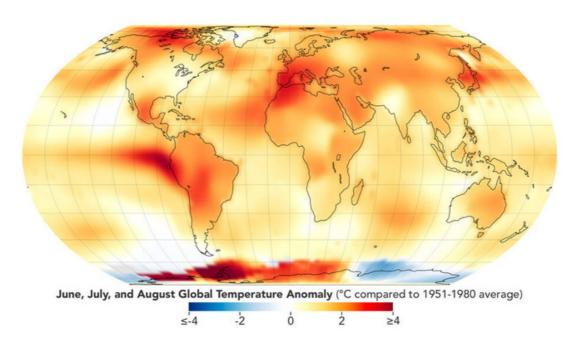
From updates on the climate crisis to new additions to the United Nations Security Council, here's a recap of some significant global events from the summer of 2023:

I. This summer was the hottest on record, and study says our current climate efforts aren't enough.

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An official assessment of the 2015 Paris Agreement, unveiled in early September, indicates that minimal advancement has been made in addressing the gravest consequences of global warming. This comprehensive report, spanning two years and based on extensive submissions from experts and leaders, underscores the imperative need for swift action on all fronts. Recommendations include phasing out the unmitigated use of fossil fuels and implementing radical decarbonization of economies. Simultaneously, a study conducted by the US research group Climate Central underscores the far-reaching impact of elevated temperatures due to climate change. Nearly the entire global populace, around 98%, experienced heightened temperatures exacerbated by carbon dioxide pollution. Furthermore, the inaugural African Climate Summit concluded with a plea from African leaders for new global levies and reforms within international financial institutions. Their aim is to generate funding for climate change initiatives, emphasizing the need for accountability of major polluters and international financial entities in providing additional resources and facilitating affordable borrowing for less affluent nations. These developments are poised to significantly influence discussions at the forthcoming COP28 conference, prompting crucial inquiries regarding the global community's approach to urgent climate challenges.



## II. Amidst the Russia-Ukraine conflict, NATO deliberates Ukraine's entry into the organization.

NATO members are currently engaged in crucial discussions about Ukraine's potential membership, a highly debated topic leading up to the Vilnius summit in July 2023. These discussions have led to divisions within the alliance, with Eastern European nations advocating for a clear path for Ukraine, while counterparts in the West and South concerned about escalating tensions with Russia. President Biden's administration supports Ukraine's eventual membership but emphasizes the need to address governance issues beforehand. Meanwhile, NATO Secretary General Stoltenberg visited Kyiv, emphasizing NATO's strong support for Ukraine. He praised Ukraine's courage and highlighted NATO's unanimous agreement on eventual membership, referencing decisions made at the Vilnius Summit. Stoltenberg commended the collective efforts of NATO Allies, expressing optimism about Ukraine's collaboration with the United States in developing weapons systems. He emphasized Ukraine's resilience against Russian aggression and applauded President Zelenskyy's peace plan. Stoltenberg reaffirmed Ukraine's place in NATO's future, pledging enduring support. This marked his fifth visit as NATO Secretary General and his second since Russia's invasion.





#### III. The White House on Regulating AI

During this summer, the White House has intensified its efforts concerning artificial intelligence (AI) policy, responding to the heightened public interest and concerns arising from AI technologies like ChatGPT. President Biden and his administration, under the quidance of Chief of Staff Jeff Zients, have been holding regular meetings to advance AI policy work, focusing on issues such as misinformation, cybersecurity, economic transformation, and equity. Having acknowledged the urgency of the matter, the administration has stated they are actively working on compiling and developing an inventory of government regulations related to Al. Major Al companies, including Google, Microsoft, and OpenAI, are expected to collaborate with the White House to announce privacy and safety commitments. Additionally, the Office of Management and Budget will release guidance for federal agencies regarding the usage and procurement of Al. Meanwhile. National Security Adviser Jake Sullivan formulating policies to tackle AI-related cybersecurity risks and establish international norms in the Al domain. The White House's goal is to strike a balance between harnessing the positive impact of Al and minimizing unintended consequences through swift and decisive action.

#### IV. The US leads inflation recovery

A recent analysis conducted by economists at the White House indicates that the United States is experiencing a faster economic recovery compared to other major economies following the global surge in inflation caused by the pandemic, the conflict in Ukraine, and disruptions in the supply chain. Although inflation rates are still higher than desired, the White House's inflation. adjusted metric for which considers cross-border comparisons. reveals that the U.S. reached a peak of around 10% last summer and has now declined to below 3%, lower than any other G7 country. Independent economists have praised this analysis for its objective comparison across nations. concerns remain, particularly regarding housing and used car prices, underscoring the necessity for ongoing efforts to address these challenges.

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## The V. The UN Security Council welcomes new members

On June 6, 2023, the United Nations General Assembly elected Algeria, Guyana, Sierra Leone, Slovenia, and South Korea as non-permanent members of the UN Security Council for a two-year term beginning January 1, 2024. Among these nations, four were uncontested, while Belarus failed to secure a spot due to its support for Russia. The Security Council consists of 15 members, with five being permanent (China, France, Russia, the UK, and the US) and 10 nonpermanent members chosen by the General Assembly based on regional representation. The selection process involves secret ballot voting, requiring a two-thirds majority. Slovenia emerged victorious for the Eastern Europe seat with 153 votes, surpassing Belarus's 38. These newly elected countries will replace the outgoing members, including Albania, Brazil, Ghana, and the UAE, joining current nonpermanent members Ecuador, Japan, Malta, Mozambique, and Switzerland.







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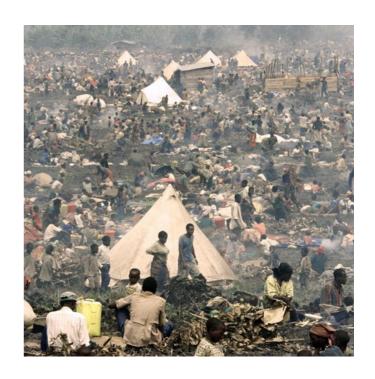
## HOW THE GENOCIDE IN RWANDA IN 1994 AFFECTS THE LIVES OF MILLIONS OF PEOPLE TODAY

Federico Leone, Italy

The Rwandan genocide, which saw armed Hutu militias massacre 800,000 people, led to their flight to Eastern Congo. The consequence was two major wars involving nine African countries and the death of millions. In 1996, Rwanda and its allies initiated an operation to stop the Hutu killers. After defeating them, the Congolese dictator Mobutu Sese Seko was overthrown, giving rise to rebel groups from various areas of eastern Congo. Due to the inner instability of the country, the "MONUSCO" operation began in 1999, a UN peacekeeping mission in cooperation with the Congolese armed forces. An agreement was reached in 2012, but it didn't last long.

In 2013, M23, the major armed group in the country, briefly reclaimed one of the major cities in Congo, Goma. Although the forces were defeated in a few days, M23 resurfaced in 2021, supported by Rwanda both financially and logistically. An intervention force composed of soldiers from Uganda, Kenya, Burundi, and South Sudan fought another significant militia in the area, the rebel group of the Democratic Allied Forces. Clearly, this was not enough to stop the powerful rebel groups, causing 800,000 people to leave their homes. It has been confirmed that, due to the brutal actions of these rebel mobs who frequently use rape as a means of war, approximately 10,000 people have died since 2017.

After giving a general background about what happened in Congo in the last twenty-five years, we can better understand and analyze the situation. Today, in Congo, M23 constitutes just a fraction of all the rebel groups ravaging the country. The UN has counted a total of 120, producing over one million refugees who have fled to neighboring countries.





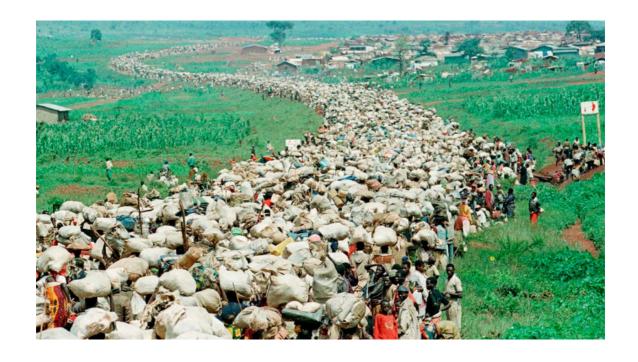
The government of Kinshasa is concerned that the situation might escalate. Meanwhile, the Rwandan government denies any connection with the actions of M23, which seems improbable considering that part of the militia in Congo comes from bordering countries, including Rwanda.

The truth is that, as mentioned, the militias and the bordering countries all have interests in seizing rich Congolese territories, which not only bear plentiful gold and minerals but also cultivable land (70 million hectares). Meanwhile, 73% of the population, approximately 68 million people, live on less than \$1.90 a day. The Rwandese government defends itself by affirming that Congo collaborates with the Democratic Forces for the Liberation of Rwanda (FDLR), considered a threat to Rwanda's sovereignty. The FDLR is also accused of killing the Italian Ambassador in 2021 on the road between Goma and Rutshuru.

As previously mentioned, the M23 is not the only rebel group in Congo. There's also the Allied Democratic Forces (ADF), known for its relations with ISIS, and Codeco, a rebel group accused by the United Nations Security Council of terribly cruel atrocities and activities. These three organizations are just a part of the 120 groups that have been plaguing the Congolese people for the last two decades, people who live in dramatic conditions of extreme poverty, risking their lives daily. The loot from these crimes includes gold, coltan, diamonds, wood, and coal.

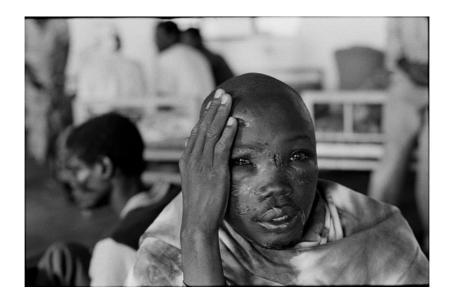






Another clear sign of the problem Congo is facing is that bordering countries take large quantities of resources mostly not present on their land. According to the US Department of the Treasury, over 90% of the gold extracted in Congo is smuggled into other countries.

Things are not looking good for the future of Congo, especially considering the resources present in its underground, such as cobalt, crucial for the green transition. Congo is the largest extractor of cobalt (95,000 tons in 2020) and uranium, essential for the increasing production of nuclear weapons in China and for energy production in nuclear plants. Nuclear energy constitutes, for example, 73% of the energy consumed in France, a country rich in nuclear power plants. To stop the exchange of these "conflict minerals," a few ineffective measures were adopted internationally regarding supply chains around the country. The Congolese population feels abandoned and believes that interest from the US and the international community is marginal and insufficient. The US Secretary of State Antony Blinken immediately denied US disinterest in the dramatic situation. Later, French President Emmanuel Macron visited Tshisekedi and Kagame, presidents of Congo and Rwanda respectively. Both parties agreed that stopping the M23 is a top priority but, unfortunately, without signing any significant agreement.







### THE SYNOD ON SYNODALITY

Tess O'Donoghue, U.S.

On October 4th, the Feast of Saint Francis Assisi, the Vatican opened the Synod on Synodality. The aim of a synod is to form a document that the pope and cardinals can use to guide their decisions, and each paragraph of said document must be approved by a vote (Dulle).

The first suggestion of a synod appears in Chapter 15 of Acts of the Apostles, while meetings of Church leaders from around the world to discuss the actions and direction of the Church have been going on for centuries.

This synod, however, has particular potential to foster change, as Pope Francis has invited lay people and women to vote for the first time. He has also urged diocesan leaders to collect feedback from their community members that can be addressed at the meeting. It is called the "Synod on Synodality" because the Church is reflecting on its past decision-making processes and considering how to adjust those processes to foster community and progress (USCCB). Pope Francis has stated that the "protagonist" of the synod is the Holy Spirit and that he hopes the conference will come together in "harmony" to ensure that all members of the Church feel heard and valued (Lubov).

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While the synod discussions are kept under wraps to promote freedom of discussion, leaders of the Church in North America have planned to bring a few key issues to the table in Rome. From late 2022 into early 2023, Church leaders held meetings in English, Spanish, and French with a group of about 900 constituents that included a balanced mix of laypeople and religious as well as women and men (O'Loughlin). The document published by these leaders, "For a Synodal Church: Communion, Participation, and Mission," stresses importance of finding "unity in diversity" and "renew[ing] the language used by the Church" to keep its teachings and traditions "accessible and attractive to the men and women of our time, rather than an obstacle that keeps them at a distance" (19, 21). For example, it aspires to foster greater welcoming of divorced and remarried Catholics as well as LGBTQ+ Catholics (29) and to increase women's decision-making power in the Church.

Looking ahead, Sr. Clevie told the Joritan that she hopes that the completion of the second session of the synod in October 2024 "will bring important changes and responses in how the Church addresses issues important to all its members." Indeed, while it is unclear what the immediate impacts of the Synod will be, the statements and actions of Pope Francis and other Church leaders indicate that it will guide the Church in a more inclusive, receptive direction.

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## **CULTURE AND EDUCATION**



### WHAT IS ECONOMICS AT ITS CORE?

Michele Cirino, Italy

Have you ever wondered what economics is? Economics can help us understand the world and how it works, but it is surprisingly difficult to give an exact definition of what it is. At its core, economics is the study of how people fabricate, administer, consume goods and services and of people's choices when facing scarcity.¹ This, however, is a generic exposition, which must be disassembled into more specific topics. Firstly, it is important to distinguish between macroeconomics and microeconomics. Next, we must look at some important concepts and principles and lastly understand how and why economics is based on choices.

There are two main branches of this field of study, microeconomics and macroeconomics, which differ in many ways. Microeconomics is the study of specific decisions made by businesses and people. More specifically, it attempts to understand consumers' behaviours, competition between firms, and supply and demand issues at a local level. According to the International Monetary Fund, comprehending how specific markets work is the focus of microeconomics. "In the realm of microeconomics, the object of analysis is a single market—for example, whether price rises in the automobile or oil industries are driven by supply or demand changes."<sup>2</sup>

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Beattie, A. (2022). Four economic concepts consumers need to know. Investopedia. Investopedia. Retrieved December 11, 2022, from <https://www.investopedia.co m/articles/economics/11/fiveeconomic-concepts-need-toknow.asp> Chladek, N. (2017). 7 reasons why you should study economics: HBS Online. Business Insights Blog. Retrieved December 11, 2022, <https://online.hbs.edu/blog/p ost/5-reasons-why-you-shouldstudyIn contrast, macroeconomics aims to fathom how nations' economies work as a whole by studying phenomena such as unemployment, measuring domestic output, analysing nations' economic policies and finances.<sup>3</sup> There are, however, some very important rules and principles that apply to the study of the economy as a whole which we must understand if we wish to apply this knowledge to the real world.

Firstly, it is essential to grasp the idea of scarcity, which everyone has experienced. Having limited resources is what causes this issue. For instance, the quantity of wheat grown every year is limited, and people have an interest in producing different goods with that material.4 As a result, some sacrifices must be made. The sale of a good only occurs when there is demand for it; the quantity of something manufactured using a limited resource is decided by another crucial concept, supply and demand. According to Robert C. Kelly, Executive Professor at the Mays Business School at Texas A&M University, any market system is driven by supply and demand. If many people wish to purchase a certain good, the demand for it is considered high, causing more of that item to be produced.5 This is connected to the concept of costs and benefits, which states that the cost of something is only justified if the benefits are greater. For instance, opening more factories to produce a greater amount of automobiles is an investment that is only justified if the profit achieved is greater. This is all based on incentives as, when demand for a product increases, business owners are incentivized to produce more of that particular good.

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Ultimately, the economy is composed of peoples', nations', and businesses' decisions. The core of economics is to study these choices and how markets respond to them in order to obtain a greater understanding of how something as complex as the sale and purchase of products functions. This study, which is done by observing certain principles and ideas that apply to any market economy, can greatly aid in the development of a nation's output or help businesses better suit their products to consumers' needs.



### **KILLERS OF THE FLOWER MOON: A MOVIE REVIEW**

Helmut Hasselbrinck, Colombia

Killers of the Flower Moon is the latest movie by the acclaimed director Martin Scorsese. It stars Leonardo DiCaprio, Robert De Niro, and Lily Gladstone. The film is based on the book of the same name by David Grann. The story is that in the 1920s, members of the Native American tribe of Osage County, Oklahoma, were murdered when they found oil on their land, and the FBI decided to investigate. If you are familiar with Martin Scorsese, you know that criminal activity is one of his obsessions. In this movie, he touches that theme very differently than in Goodfellas or The Wolf of Wall Street. Scorsese takes advantage of the almost four hours of film for us to know the Osage and their community.

We also know the "wolves" are the characters that are not for the native group but that are in the same territory. The story is from the perspective of these wolves. Leonardo DiCaprio is protagonist. In this movie, he is not a charismatic criminal like Jordan Belfort. He is a dumb man gets manipulated who practically everyone. DiCaprio is excellent in this movie, as he always is. He makes this despicable individual believable and knows when to transmit every Ernest emotion. (Dicaprio's character) is the pet of Robert De Niro's character, "King." It is practically unnecessary to say that De Niro was excellent in this movie; he is one of the greatest actors of all time, but the movie's surprise is Lily Gladstone as Molly.





She can be the least known from the cast, but she steals every single scene she is in. There are scenes where she says everything with her eyes and emotions without saying a single word. She is my pick for Best Actress at the Oscars. The movie is highly graphic in violence against the Osage community. The film wants you to feel the pain that the Osage felt with these extremely inhuman murders. If you are sensitive, you will probably cry. You will likely be disappointed if you expect a movie with the pacing of Goodfellas, The Departed, Casino, etc. This movie is very dense and slow and needs your attention. There have been many negative reviews of the film because of the three and a half hours of runtime, but it's necessary for this kind of story. You will be energized if you get into it and focus on this complex piece of art. I didn't expect that this film would be funny. It has scenes of extraordinarily dark and bizarre humor that help to balance the story.

As for my final thoughts, Scorsese can't disappoint, and this film is no exception. He and the whole crew put a lot of work into this film, and all the problems on the set were worth it. Pictures like this are rarely made nowadays, so it is a miracle that we can enjoy this masterpiece.

Fantastic performances, cinematography, story, themes, and storytelling make this movie an absolute must-see. My final rating is a perfect 10/10.



## INTERVIEW OF SOYEON KATE LEE: THE IMPACT OF COVID-19 ON HER MUSIC CAREER

Sara Wang, U.S.

The COVID-19 pandemic has altered many aspects of human existence. It has heavily impacted the economy, environment, many families, and many more unexpected elements, all of which have affected human life. According to the World Economic Forum in 2020 "The music industry has been hit hard by coronavirus with live performance revenue - the biggest casualty." Overall, COVID has impacted the music industry immensely, resulting in some decline in live performances and the livelihood of musicians.

I have been learning music and piano since I was 3 years old. The most exciting event happened to me in the summer of 2023, when I went back to China to visit my family. I performed many concerts, touring in Beijing, Shenzhen, and Changsha. It was especially hard to attend and perform live concerts those days because of the restrictions of COVID-19. I cooperated with orchestras and chambers, and the musicians all said that it was much more convenient and easy getting everyone together to rehearse and perform before the pandemic. During my concerts, the audiences, although more than I expected, were much smaller than the limit of the venues, and almost everyone was wearing masks.

Last weekend, I interviewed my piano professor, Soyeon Kate Lee. She is a Korean-American pianist, who currently lives in Rochester, New York. Lee joined the college and pre-college faculty of Juilliard in July 2022 as the first woman of Asian descent. Born in Seoul, Korea, Ms. Lee came to the States at the young age of 9 to study at the Interlochen Academy. She later studied at Juilliard for her Bachelor's and Master of Music degrees. She won first prize in the Naumburg International Piano Competition in 2010 and the Concert Artist Guild International Competition in 2004. Both in my classes and when I sat down with her, Soyeon Kate Lee has described how COVID has impacted her life as well as many other musicians' careers.

Q. How did you and your husband feel about the pandemic when it first started, as musicians?

A. I think the entire world - people in every profession - was paralyzed with fear because there was so little information about it and so many dying. For musicians whose sole purpose is to perform for the public, the impact was immediate and scary.

Q. What kind of an effect is the coronavirus pandemic having on the careers of musicians or musicians in general?

A. After roughly two years of zero live concerts, the losses were felt by presenters and concert organizations which were not able to make it financially. We still feel the effects of it today even though many are returning to the concert halls. Members of the orchestra simply could not rehearse together during the pandemic - brass and woodwind players could not play their instruments with others since they needed to breathe out to produce sound. Younger musicians who were studying had to take their lessons on Zoom, which was a lifesaver but is not an alternative for learning all the nuances of music.

Q. What effect do you think the shutting down of many concert halls and venues has on the culture of classical music or music in general?

A. It was catastrophic. The MET orchestra musicians suffered pay cuts, as did the NY Philharmonic and other major entities. It was demoralizing to have no way of showing up for work and sharing the music. The silver lining, however, was that live streaming became a necessity and suddenly we could share the music, however sub-optimally, with the entire world in real-time.









Q. Do musicians face hardships during the coronavirus pandemic? How do you overcome these challenges?

A. Certainly. I think the emotional and psychological hardships were suffered by all, especially those who live alone. The sense of "not knowing" creates fear. The fact that we could not be in the company of family and friends for such an extended period of time to share not just music, but life, laughter, and sadness, in person was profoundly isolating.

Q. As you (and your husband) are piano professors, in what ways do you think covid affected your teachings or your interactions with students? Were there any transitions or big changes in your way of teaching?

A. Zoom lessons were very hard at first but my husband is a tech pro and he quickly set us up, so it became more productive. I do think it had a big impact on my teaching because I became even more aware of the psychological vulnerability of my students; some of them hadn't seen their families abroad in years, and couldn't go see them, couldn't return home when family members were very sick and some dying. The lessons became a time of healing and sharing more than piano lessons. The important lesson during the period was the value of getting together - how wonderful it is that we are able to spend that one-on-one time to explore music together. It made me a lot more grateful.

Q. Now that the 2023 covid peak seems to have passed, how do you feel about that and how does it change your musical life?

A. Well, the positive is that Zoom lessons are here to stay, and that is very helpful during my travels and hearing my students when they are home in various parts of the world. With concerts, I am hopeful that we will get back to where things were in terms of attendance with a bit more time. I sometimes joke that I am so glad to be a pianist because being able to go solo on stage for a recital is safer than going maskless with a large group of musicians.



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