

NOBEL PRIZES : 2021

Thirteen Laureates were awarded a Nobel Prize in 2021, for achievements that have conferred the greatest benefit to humankind. Their work and discoveries range from the Earth's climate and our sense of touch to efforts to safeguard freedom of expression. Look for awards and Laureates in different fields:

CHEMISTRY

Professor Göran K. Hansson, Secretary General of the Royal Swedish Academy of Sciences, announced on Wednesday, October 6, 2021 the award of the Nobel Prize in Chemistry for 2021 jointly to the German scientist Benjamin List, Max-Planck-Institut, Mülheim, Germany and Scotland-born David W.C. MacMillan, Princeton University, New Jersey, USA “for the development of asymmetric organocatalysis.” The Prize money of 10 million Swedish kronor will be shared equally between the two Laureates. Immediately after the announcement, Peter Somfai, a member of the Nobel Committee, commented that “*It’s a game changer. Like a new chess piece that is very, very powerful.*” Organocatalysis, developed independently by the two Laureates, is a “precise, cheap, fast and environmentally friendly” way to develop new molecules.” It has a tremendous impact on drug development and green chemistry.



Benjamin List
Credit: © Frank Vinken

Nature builds an astounding number of molecules of different shapes and sizes from simple building blocks, viz. small organic molecules using ‘catalysts’ of two types – enzymes and metals. In 2000, the two chemists independently developed a third type of catalysis, viz. asymmetric organocatalysis where small organic compounds were used as catalysts. List used proline and



David W.C. MacMillan
Credit: © Todd Reichart

MacMillan used an imidazolidinone in their first published work. According to Johan +!qvist, Chair of the Nobel Committee for Chemistry, “*This concept for catalysis is as simple as it is ingenious, and the fact is that many people have wondered why we didn’t think of it earlier.*”

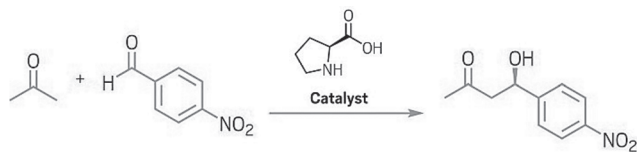
Benjamin List was born in 1968 in Frankfurt, Germany and did his Ph.D. in 1997 from Goethe University Frankfurt, Germany. Currently, he is the Director of the Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany. David MacMillan was born in the same year (1968) in Bellshill, North Lanarkshire, Scotland, U.K. and did his Ph.D. in 1996 from the University of California, Irvine, USA. Currently, he is a Professor at Princeton University, USA.

Before the turn of this century, thousands of catalysts have been developed and used globally. These catalysts were either metals or enzymes (i.e. proteins having some specific biological activities). But the use of metal catalysts is problematic because metals are sensitive to water/moisture and oxygen, and the maintenance of a moisture-free and oxygen-free atmosphere in industrial productions is troublesome and expensive too. Moreover, the presence of even minute quantities of metals in drugs is harmful, and the removal of metals is labourious and expensive. Also, many of the metals, used as catalysts, are heavy

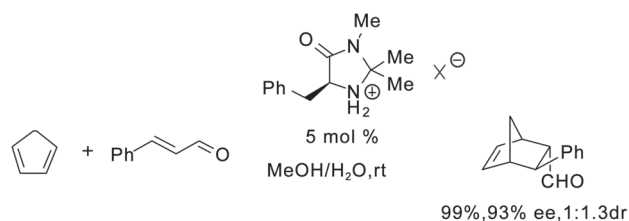
metals which are harmful to the environment.

Enzymes, however, are wonderful catalysts used by nature. They can act as asymmetric catalysts, preferentially furnishing one enantiomer. Besides, different enzymes can act one after another in successive steps of a multistep synthesis, thereby obviating the need to isolate intermediates after each step. Researchers were, therefore, trying to develop new variants of enzymes for their use in asymmetric catalysis. Benzhamin List, then a Postdoctoral Fellow in the laboratory of Carlos F. Barbas III, was pursuing it at The Scripps Research Institute, La Jolla, San Diego, California.

Benzamin wondered if all the amino acids of an enzyme are necessary for its catalytic activity. He tried an amino acid *L*-proline for catalysing the intermolecular aldol reaction between acetone and *para*-nitrobenzaldehyde in DMSO. The reaction proceeded brilliantly, furnishing one particular mirror image in 76% enantiomeric excess (ee). Benzhamin published his work in February, 2000 (*J. Am. Chem. Soc.*, 2000, 122 (10), 2395-2396; doi: 10.1021/ja994280y). He described asymmetric catalysis with small organic molecules like proline as a new concept with huge potential.



Around the same time David MacMillan at the University of California, Berkeley was trying to design small organic compounds (which were able to form iminium ions) for their use as catalysts. He used a chiral (i.e. asymmetric) imidazolidinone hydrochloride for catalysing the Diels-Alder cycloaddition reaction between dienes and α,β -unsaturated aldehydes. The reactions proceeded extremely efficiently, furnishing the Diels-Alder adducts in high yields and with high isomeric (*exo*-) purity (ee). He



published his work almost concurrently (*J. Am. Chem. Soc.*, 2000, 122 (17), 4243-4244; doi: 10.1021/ja000092s). MacMillan coined the term 'asymmetric organocatalysis' for this newly developed methodology with the expectation that the method would be widely applicable. An example is shown below.

By now a large number of cheap, stable and highly efficient organocatalysts have been developed, in which List and MacMillan continue to be the main contributors. This type of catalysts has an additional advantage that they are applicable to cascade reactions so that the product from each step need not be isolated and purified before use in the next step. As a result, less waste is created and the overall yield of the final product becomes enormously enhanced. For example, strychnine was first synthesised in 1952 in 25 steps, and the overall yield was only 0.0009%, and the rest was simply wasted. In contrast, a cascade synthesis of strychnine using organocatalysis was achieved in 2011 in only 12 steps, and the process was 7,000 times more efficient than the 1952 synthesis.

Plenty of bioactive molecules exist as a pair of stereoisomers (i.e. non-superimposable mirror images), one of which exerts the desired bioactivity whereas the mirror image molecule may even be harmful. Thalidomide is a classical example. The synthetic product, a 1:1 mixture of two enantiomers, was first marketed in 1957 in West Germany as an antiemetic OTC drug for 'Morning Sickness' of pregnant women. But women users of this drug gave birth to babies with deformed and/or missing limbs. The outcome was so disastrous that the drug was withdrawn from the market in 1961. It was later found out that one of the two isomers is responsible for the observed harmful effect. There lies the importance of asymmetric organocatalysis, whereby only the desired type of stereoisomer may be preferentially synthesised.

The discovery of List and MacMillan are now bringing 'the greatest benefit to humankind'.

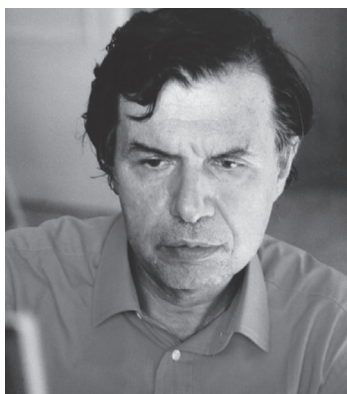
Pertinently, both Charpentier and Doudna were named as Citation LaureatesTM in 2015 by Clarivate plc. □

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PHYSICS

The Nobel Prize in Physics for the year 2021 has been awarded, one half to Giorgio Parisi, and the other half, jointly to Syukuro Manabe and Klaus Hasselmann for their “ground-breaking contributions to our understanding of complex systems”.

Complex physical systems span over fantastic ranges, from the dynamics of quark-gluon plasma, to spin-glasses, to turbulence, flocking in animal movement to climate of the earth to evolution of stars. Solving of the dynamics of individual components in such systems is neither possible nor relevant. When you study the *murmuration* of starlings (tiny birds which form fantastic swarms all diving

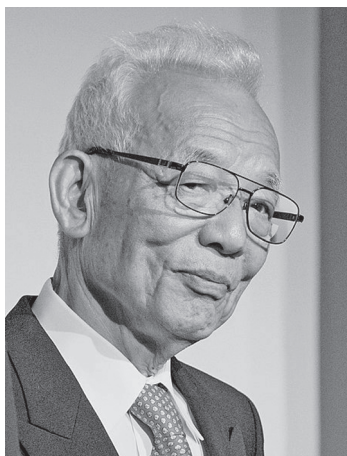


Giorgio Parisi
(https://upload.wikimedia.org/wikipedia/commons/thumb/c/c1/Parisi_giorgio.jpg/220px-Parisi_giorgio.jpg)

or swirling in eerie patterns), the dynamics of an individual starling is not relevant when modeling the flocking behavior on a computer.

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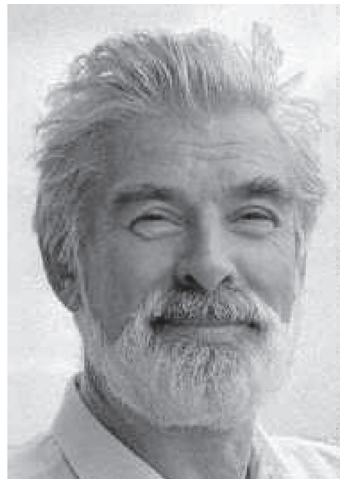
Giorgio Parisi (b 1948, Rome, Italy), a professor of Quantum Theories at the Sapienza University of Rome, is an Italian theoretical physicist working in the areas of quantum field theory (Altarelli–Parisi equation in QCD for



Syukuro Manabe
(<https://www.flickr.com/photos/bnsd/42329290061/>)

parton density evolution), statistical mechanics (Parisi limit in the solution of Sherrington Kirkpatrick model for Ising spin glass, Kardar-Parisi-Zhang equation for dynamic scale for growing interfaces) and complex systems (collective motion and swarms of animals). He is the recipient of a large number of medals, viz. Boltzmann medal (1992), Dirac medal (1999), Fermi prize (2002), Dannie Heineman Prize (2005), Nonino Prize (2005), Microsoft Award (2007), Lagrange Prize (2009),

Max Planck Medal (2011), Lars Onsager Prize (2016). Giorgio Parisi received the Nobel Prize for his contributions in the study of complexity in “the physical systems from atomic to planetary scales”.



Klaus Hasselmann
(<https://mpimet.mpg.de/en/staff/externalmembers/klaus-hasselmann>)

natural climate variations. Earlier people used to believe that the basic equations which govern our climate are so complex (one of the equations used is the Navier-Stokes equation, which is extremely sensitive to boundary conditions, and a small perturbation can cause large fluctuations in the output, *c.f.* the *Butterfly effect*) that larger and larger computers are needed to get any understanding of how the weather is going to behave any time in the future. Syukuro Manabe built models which served as the scaffolding for all future climate models and which can resolve the smallest scales and march on to the larger scale predictions accurately. He was the first recipient of the Blue Planet Prize (1992) and received several other awards Benjamin Franklin Medal (2015) and his work in the development of the first global climate models has been selected as one of the top ten breakthroughs in NOAA’s first 200 years. This model was also applied to the study the past climate change, and the role of freshwater input in North Atlantic Ocean as a potential cause of the abrupt change in paleoclimate. Manabe also worked on global warming where he studied coupled atmosphere ocean models to investigate the time-dependent response of climate to changing greenhouse gas in the atmosphere.

Klaus Hasselmann (b1931, Hamburg, Germany) an Emeritus Scientist at Max Planck Institute for Meteorology,

Syukuro Manabe (b 1931, Shinritsu, Japan) a senior meteorologist at Princeton University (also a visiting research collaborator at the Program in Atmospheric and Oceanic Science, Princeton University) is an American meteorologist and climatologist who developed computer models to simulate global climate change and

Hamburg, Germany, is a German oceanographer and climatologist who developed models of climate variability, where a system with a long term memory, like the ocean, through stochastic forcing, transforms a white-noise signal (a spectrally flat system) into a red-noise one (where the noise spectrum is prominent at the low frequency end, declining to the higher frequency side). This is the Hasselmann model which explains the genesis of the long wavelength swell waves in ocean. Hasselmann has won a number of awards including the Sverdrup Medal (1971), the Symons Memorial Medal (1997) and the Vilhelm Bjerknes Medal (2002) of the European Geophysical Society.

This was the first time the Nobel Prize in physics

was awarded to climatologists, “for the physical modeling of Earth’s climate, quantifying variability and reliably predicting global warming”. Though it may seem that the Nobel Prize is divided into two domains, but both these domains come under the umbrella of complex systems. □

Source:

1. Nobelprize.org
2. Wikipedia

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PHYSIOLOGY OR MEDICINE

Two American Scientists David Julius and Ardem Patapoutian won the 2021 Nobel Prize for Physiology or Medicine for the discovery of receptors in the skin that sense temperature and touch. It was awarded for discoveries related to how the human body senses temperature and touch and for discovering

**David Julius**

the molecular bases of how nerves convert stimuli—the burn of a chilli pepper, or the soft pressure of a hug—into signals that can be sensed by the brain. Humans’ abilities to sense heat, cold, pressure and position are vital for perceiving and reacting to our surroundings. Understanding how they work is critical for treating chronic pain and other

conditions.

Ardem Patapoutian, who was born in 1967 to Armenian parents in Lebanon and moved to Los Angeles in his youth. He discovered the cellular mechanism and the underlying gene that translates a mechanical force on our skin into an electric nerve signal. Patapoutian is a Professor at Scripps Research, La Jolla, California.

David Julius, 65, born in New York is a Professor at University of California, San Francisco. His findings were inspired by his fascination for how natural products can be used to probe biological function and he used capsaicin, the molecule that makes chili peppers spicy by simulating a false sensation of heat, to understand the skin’s sense of temperature. Julius hopes his work will help identify new strategies for treating chronic pain syndromes. Julius and his colleagues worked to find the receptor for capsaicin, a component in chilies that causes

a painful burning sensation. They identified the gene that encodes a new protein, called TRPV1—an ion channel in the membranes of cells that opens in response to heat. Julius got the idea to do his capsaicin experiments while shopping in a grocery store: “Walking through the supermarket aisle one day, seeing all these hot chili pepper.

**Ardem Patapoutian**

Julius and Patapoutian independently identified another protein: TRPM8, which is sensitive to cold and menthol. Additionally, Patapoutian and his colleagues identified the genes for proteins that sense touch, known as Piezo1 and Piezo2. He showed that these two proteins were force-activated ion channels.

Piezo2 was also found to be important for sensing the positions of limbs in space, an ability known as proprioception.

Their work, carried out independently, has helped us to understand how we convert the impact of heat or touch into nerve impulses that allow us to perceive the world around us.

The Nobel Prize in Physiology or Medicine 2021 was awarded jointly to David Julius and Ardem Patapoutian “for their discoveries of receptors for temperature and touch.” □

Syamal Roy

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ECONOMICS

The Royal Swedish Academy of Sciences has awarded the Nobel Prize in Economics 2021 (Sveriges Riksbank, Prize in Economic Sciences in Memory of Alfred Nobel 2021) to David Card of the University of California, Berkeley, Joshua Angrist of the Massachusetts Institute of Technology, Cambridge USA and Guido Imbens of the Stanford University. David Card has received half of the Prize money for his novelty in empirical contributions to Labour Economics and the other half is received jointly by Joshua Angrist and Guido Imbens for their methodological contributions to the analysis of causal relationships. The Laureates' contributions are separate but complementary. All of them answered causal questions in social sciences using observational data generated in society.



David Card

David Card began to analyse core questions in labour economics using an iterative process of replications, new empirical studies, and theoretical works. He published series of papers from the early 1990s and addressed some central questions involving causal relations between

minimum wage, immigration and education. His findings challenged conventional wisdom and led to new research that led to a considerably better understanding of how the labour market operates. For making good decisions, one must understand the consequences of his choices. So the policy maker must understand the causal relationship among variables. However, answering broad questions about cause and effect is not easy; because he never knows what would have happened if a different choice is made.

One way of establishing causality is to use randomised experiments, where researchers allocate individuals in different groups by a random draw. Applied sciences are concerned with uncovering causal relationships. In many fields, randomized controlled trials (RCTs) are considered the best method for achieving this. The systematic use of RCTs to study causal relationships, for example, assessing the efficacy of a



Joshua Angrist

medical treatment, has resulted in tremendous welfare gains in society. But this is not always suitable for investigating many societal issues, as they are much more complex. The social and economic problems are prone to natural random variations, institutional rules and policy changes. Financial, ethical, or practical constraints also matter. In a clinical trial, the researcher has complete control over the treatment group— who is offered a treatment and eventually receives it and the control group— who is not offered the treatment and therefore does not receive it. In a natural experiment, the researcher also has access to data from treatment and control groups. But, unlike a clinical trial, the individuals may themselves have chosen whether they want to participate in the intervention being offered. This makes it much more difficult to interpret the results of a natural experiment.



Guido Imbens

In an innovative study from 1994, Joshua Angrist and Guido Imbens showed what conclusions about causation can be drawn from natural experiments in which people cannot be forced to participate in the programme being studied. The framework they created has radically changed how researchers approach empirical questions using data from

natural experiments or randomised field experiments in social sciences. They developed a framework, involving core identifying assumptions in a causal design and provided a transparent way of investigating the sensitivity to violations of these assumptions. For this they merged the instrumental variables (IV) framework, common in

economics, with the potential-outcomes framework for causal inference, common in statistics.

Peter Fredriksson, Chair of the Economic Sciences Prize Committee observed:

“Card’s studies of core questions for society and Angrist and Imbens’ methodological contributions have shown that natural experiments are a rich source of knowledge. Their research has substantially improved our

ability to answer key causal questions, which has been of great benefit to society,” □

Pranab Kumar Chattopadhyay

Former Professor of Economics &

Former A K Dasgupta Chair Professor in

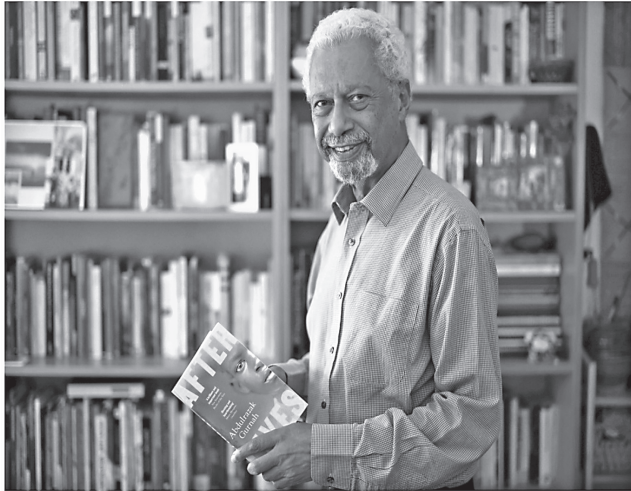
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LITERATURE

“Uncompromising and Compassionate”: The Fiction of Abdulrazak Gurnah



The fiction of Abdulrazak Gurnah attempts to portray the themes of racism, colonialism, violence and identity through the prism of memory taking the Eastern Coast of Africa, especially Tanzania as its background. Gurnah was born in Tanzania in 1948. Gurnah's writings are squarely placed in the violent intersection of the Zanzibar revolution and he too migrated in the 1960s to Britain. The play between belonging, uprootedness, migration and readjustment therefore remains key themes in almost all his fictions, which are based in erstwhile Zanzibar. Gurnah followed a traditional colonial education in Tanzania but was forced to migrate to Britain in 1967, subsequently studying in Christ Church College, Canterbury. After a brief stint as lecturer in Nigeria, he was appointed Professor at the University of Kent, where he continues to serve as Professor Emeritus. While he is established as an academic, his novels had very limited circulation until he won the Nobel Prize.

Gurnah's first novel, *Memory of Departure* (1987) follows the trajectory of a young man's growth to maturity in the background of the Zanzibar revolution. Hassan Omar, aged fifteen, traces his school years, travels to Nairobi, romances his cousin Salma and finally returns home, only to depart for Madras where he has secured a job as a medical orderly. Gurnah's debut novel highlights the multicultural texture of the Eastern African coast with different countries jostling for space. In his second novel, *Pilgrim's Way* (1988), the black immigrant protagonist Daud seems to be an alter ego to Gurnah as he works as a hospital orderly in the town of Canterbury, where Gurnah

himself lives and works. The novel highlights the implicit racism in British society with Daud striving to live outside the stereotypes of historiography. Racial tension is also a feature of Gurnah's next novel *Dottie* (1990) which tells the story of a young black British girl. Dottie's (incidentally she is British born although an individual of colour) interactions with an eminent black doctor whom she saw as a surrogate grandfather, leads to her realisation that Black people will never receive much recognition in society.

Gurnah's most famous novel *Paradise* (1994) uses the structure of the *Bildungsroman* to trace the journey of the young Yusuf into maturity in the background of pre-World War I Zanzibar. Yusuf is sold to his uncle, the merchant Aziz, to pay off his father's debt. He accompanies Aziz through the heartland of Zanzibar, through indigenous societies, revealing the faultlines within African society. Gurnah's satiric glance spares none as he looks at the complicity of Muslim and Indian traders in facilitating the slave trade, the violence with African tribal society and the ruthlessness of the African plunderers. The irony within the title exposes a more realistic and anti-romantic vision of African society with its strife, distrust and contradictions, ready to explode into violence. *Paradise* was shortlisted for the Booker Prize in 1994.

In *Admiring Silence* (1996), the nameless narrator marries an English woman and tries to reconstruct a romantic version of Zanzibar through erstwhile stories. His actual return to the violent reality in Africa shatters his illusions, highlighting Gurnah's dismissal of any romantic myth of nationalism within the African continent. *By the Sea* (2001) is a nuanced story of two immigrants Omar and Mahmud, who narrate their intertwined family histories. Omar, an erstwhile prosperous merchant was betrayed and has endured detention camps and has escaped to Britain. Gurnah's novel, *The Last Gift* (2011) is again centred on an ailing African immigrant. Ravaged by a series of diabetic strokes, he confesses about his dark past in Zanzibar where he had abandoned his erstwhile wife Sharifa and an unborn child, forty-four years ago. As he confesses to his wife Maryam, he has been a troubled citizen of both countries racked by a sense of guilt and non-belonging. As Gurnah once commented "Places don't live just where they are, they live within you" (Nair).

Gurnah's latest novel *Afterlives* (2020) follows the lives of four protagonists living in the early twentieth century

in an unnamed part of the Swahili coast. The tales are told in the background of the broader unfolding narrative of German colonial rule to the moment of independence in Zanzibar. *Afterlives* is a text that brutally narrates the generational impact of colonialism and the loss of the African perspective in colonial history.

An overview of Gurnah's creative career suggests a fascination with exile, immigration and memory. His childhood memories of Zanzibar before the 1960's create a space that haunts most of his characters as utopian in the imagination. However, Gurnah's texts reveal contradictions, cruelties and latent violence implicit in these societies under long colonial legacy. Gurnah's attempt to trace a multicultural past with the arrivals across the Indian Ocean routes, questions the dominant Afrocentric narrative and suggests the Eastern Coast was a far greater *melange* of identities, especially Arabic. The point of departure in most of his novels happens to be the Zanzibar revolution which throws citizens in chaos, forcing them to migrate. Like Gurnah, these characters arrive in Britain in a state of panic and confusion, are met with racism and hostility and seek to eke out an existence. They are perpetually located in a world of shadows where the past intrudes onto an uncomfortable reality. In the process, Gurnah excavates individual tales laced with betrayal, rejection and desertion which haunt his protagonists.

Gurnah's tales become increasingly more relevant in our times where societies are faced with exodus and immigration. Faced with the hostility of the host countries (faced with job losses and being overwhelmed to lose their identities), Gurnah offers an interiority into psychology of the immigrant, who often battle their own demons only to confront hostile realities and emerge as 'nowhere men'.

Gurnah underlined the need for sensitization and humanity for the sake of the displaced:

We are at that time again. The debate over asylum is twinned with a paranoid narrative of race, disguised and smuggled in as euphemisms about foreign lands and cultural integrity. There is a rational and humane way to conduct this debate ... that better way requires knowledge and humanity, not glib and diminishing clichés.

It is in this context that the Nobel Committee bestowed the Nobel Prize for Literature to him in 2021 "for his uncompromising and compassionate penetration of the effects of colonialism and the fates of the refugee in the gulf between cultures and continents". □

Works Cited

- Gurnah, Abdulrazak, "An Idea of the Past", *Moving Worlds*, 2.2, 2002, reprinted in *A Twentieth-Century Literature Reader*, ed. Suman Gupta and David Johnson, Routledge, 2005, pp 289-292.
- "Fear and Loathing". The Guardian. 22nd May 2001. Accessed on November 19, 2021.
<https://www.theguardian.com/uk/2001/may/22/immigration.immigrationandpublicservices5>
- Nair, Vijay, "In Conversation with Abdulrazak Gurnah", 2005. Accessed on November 19, 2021.
http://vijaynair.net/index.php?option=com_content&task=view&id=14&Itemid=28#gurnah

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PEACE

When Mind is free from fear: Nobel Peace Prize of 2021

*“Where the mind is without fear and the head is held high
Where knowledge is free”...*

The words of Rabindranath Tagore come to our mind when we heard the declaration of this year’s Nobel Peace Prize. The Nobel Peace Prize had been awarded to two scribes for their efforts to safeguard freedom of expression. The Norwegian Nobel Committee is of the opinion that this freedom of expression is a “precondition for democracy and lasting peace”. The two scribes Maria Ressa and Dmitry Muratov have showed outstanding efforts in their fight for freedom of expression. Though both were awarded the coveted prize jointly yet they belonged to two different countries. Even their courageous fight brought them in the same boat. Maria Ressa belonged to Philippines whereas Dmitry Muratov belonged to Russia. But basically they don’t belong to any particular country. They represent “all journalists who stand up for this ideal in a world in which democracy and freedom of the press face increasingly adverse conditions”. This recognition has brought their fight under focus.



Maria Ressa

Maria Ressa has exposed abuse of power, use of violence and authoritarianism in Philippines. She has founded a digital media company *Rappler* for investigative journalism. As a scribe and the head of her organization *Rappler*, she has revealed “Duterte regime’s controversial, murderous anti-drug campaign. The number of

deaths is so high that the campaign resembles a war waged against the country’s own population”. She has also stood against fake news. She has shown “how social media is being used to spread fake news, harass opponents and manipulate public discourse”. Thus the contemporary social evil has been revealed through her investigative journalism. She has never made any compromise with the power. On the contrary she has upheld the freedom of press.

Russia’s Dmitry Andreyevich Muratov also stood for

freedom of speech in his own country. In 1993, he along with others has founded the independent newspaper *Novaya Gazeta*. Since 1995 he has been the newspaper’s editor-in-chief for a span of 24 years. It is said that *Novaya Gazeta* is the most independent newspaper in Russia today. It has a fundamentally critical attitude towards power throughout its existence. Muratov has led the crusade against violence. He always emphasized fact-based journalism and professional integrity which is the motto of *Novaya Gazeta*. This ideal has made the newspaper a faithful source of information on censurable aspects of Russian society rarely mentioned by other media. Since its beginning, *Novaya Gazeta* under the leadership of Muratov has published critical articles on “subjects ranging from corruption, police violence, unlawful arrests, electoral fraud and ‘troll factories’ to the use of Russian military forces both within and outside Russia”.

Novaya Gazeta has to face harassment, threats, violence and murder from its opposition. Six journalists of *Novaya Gazeta*, including Anna Politkovskaya who wrote revealing articles on the war in Chechnya, had been killed for rising against the power. That was not the death of six individual journalists, but the freedom of press was murdered. Though his colleagues became martyr for a cause, others had to face threats yet Muratov refused to give up the independence of his paper. His untiring efforts for defending “the right of journalists to write anything they want about whatever they want, as long as they comply with the professional and ethical standards of journalism” never end.

The fight of this year’s Nobel laureate scribes was not an exception. Between 2006 and 2020, over 1,200 journalists have been killed for reporting the news and bringing information to the public. In nine out of ten cases the killers go unpunished, according to the UNESCO observatory of killed journalists. Killing is the extreme step; journalists are subjected to threats and tortures. This kind of attack on journalists is aimed at creating fear among themselves so that they could not reveal the abuse of power and corruption. The people in power have the feeling that through these kinds of harassments and tortures the fearless works of journalists could be stalled.

Women journalists are in a more vulnerable position. According to UNESCO’s recent discussion paper, *The Chilling: Global trends in online violence against women journalists*, 73 percent of the women journalists surveyed



Dmitry Muratov

said they had been threatened, intimidated and insulted online in connection with their work. As the opposition of the freedom of expression is very powerful the threats and attacks on journalists are seldom properly investigated. Naturally punishment of the culprits is a distant dream.

For the cause of journalists' freedom a day has been marked. The *United Nations General Assembly* proclaimed 2 November as the 'International Day to End Impunity for Crimes against Journalists' in General Assembly Resolution A/RES/68/163. The Resolution urged Member States to implement definite measures countering the present culture of impunity. The date was chosen in commemoration of the assassination of two French journalists in Mali on 2 November 2013. The 2021 International Day to End Impunity for Crimes against Journalists highlights the instrumental role of prosecutorial services, in investigating and prosecuting not only killings but also threats of violence against journalists. Thus awarding of two journalists by the Nobel Committee has a great relevance. Undoubtedly freedom of expression is a pre-condition for democracy that would pave way for peace.

In the subcontinent we also notice persecution of protesters. In India Narendra Dabholkar, Gobind Pansare M.M. Kalburgi and Gouri Lankesh had been killed for their advocacy of rationalism and independence of thinking in the last decade. A number of bloggers who propagated freedom of expression in Bangladesh were also killed in

the last few years. Among them mention may be made of Rajiv Haider, Avijit Roy, Washiqur Rahman Babu, Ananta Bijoy Das and Niloy Chatterjee. Thus we find the freedom of expression is under threat in almost every part of the globe. Here lies the significance of this year's Nobel Peace Prize.

Science and Culture from its beginning in 1935 has emphasized public understanding of science and culture together. This ideal also corroborates with the thinking of Nobel Committee, which said "Without freedom of expression and freedom of the press, it will be difficult to successfully promote fraternity between nations, disarmament and a better world order to succeed in our time." At the end we would like to quote Rabindranath once again as he wrote in *Gitanjali*, (for which he got the Nobel Prize in Literature), that

"Where the world has not been broken up into fragments

By narrow domestic walls.

Where words come out from the depth of truth,

Where tireless striving stretches its arms toward perfection."...

Rightly, the Nobel Committee remarked that "this year's award of the Nobel Peace Prize is therefore firmly anchored in the provisions of Alfred Nobel's will." □

Reference:

The Nobel Peace Prize 2021. NobelPrize.org. Nobel Prize Outreach AB 2021. Tue. 26 Oct 2021. <https://www.nobelprize.org/prizes/peace/2021/press-release/>

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