

G.M. QUADER

A country's governance on personal whim by a single person is considered to be an autocracy. An autocratic rule is, in that sense, observed to be anti-people; failing to conceive the aspiration and fulfill their hopes.

And so people demand a governance system where they can take charge and run the affairs of the state through elected representatives -- the ultimate objective being to have welfare-oriented pro-people governance. This is how the concept of democracy evolved.

Democracy intends to ensure a running of the state affairs for the welfare of its people; with a visible reflection of their views. Election of the representatives does not necessarily guarantee the delivery of a democratic rule. If the governance is centralised on a single person, who cares little for the need of the citizen's, it is considered an autocracy even if it is elected.

"Power corrupts and absolute power corrupts absolutely." To ensure pro-people governance by the elected representatives, it is essential that there is mechanism for proper accountability. Also there should be scope for rectifying wrong doings of those in power. Presently, Bangladesh practices a parliamentary form of government, where the parliament and the judiciary are the institutions to hold the government accountable for its actions. To deliver good governance, it is necessary that these two institutions are kept away from influence of government.

In all previous elections, since 1991, the party that won had selected the party chief as the prime minister (PM) or head of government. PM retained the position of the party chief with the absolute authority over the political party's activities. As per constitution, all executive power of the government is reposed with the PM so much so that the government simply means PM for all practical purposes.

So, the PM has absolute control over both the party and the government.

As per clause 70 of our Constitution, the members of parliament (MPs) elected on nomination from a party are barred from crossing the floor; meaning MPs are bound to accept the dictates of the party for any decision in the parliament. So, PM being the party chief, and the parliamentary party chief, has the scope to impose his/her decisions on the MPs. This allows the PM to control the decisions of the parliament with the captive support of the government party MPs who constitute majority in the House.

The Speaker, elected by the majority vote of the MPs, holds the highest position in parliament and can also be removed from position through a majority vote as well. Again, this allows the PM to select anybody loyal to him/her and have full control of that position along with its activities.

With the parliament being the House of the people where the issues are ventilated and where the government is asked to account for its actions, and its chief being the speaker, who is under the control of PM, the parliament is simply being used just to legalise the actions of the government, and is considered as rubber stamp parliament.

It is then natural that parliament will not be able to effectively ensure the accountability of the head of the government.

Parliament is being considered dysfunctional by all the political parties, including the present ruling party -- they expressed similar opinions at different times by boycotting and once even by resigning from the parliament when in the Opposition. Given that the parliament is the most vital institution for a democracy, when it itself remains malfunctioning, democracy naturally cannot exist.

The separation of judiciary from the executive has been stipulated in the constitution. Some measures have been taken in that direction too. But as per distinguished personalities in the field, real independence of judiciary is yet to materialise.

The position of a president is the highest ranking person in the country; which has been made non-partisan in the constitution. This post is to be filled in by a person considered dependable and acceptable to all and yet the post is filled in by majority vote of the MPs. So, PM can select any person for that position and party MPs have no other option but to vote in line.

Removing the president requires a two-third majority vote by the MPs. The present AL government possesses this



PHOTO: ART REVOLUTION

absolute majority and the last BNP-led government also exercised that majority in parliament. Given this state, the president can be removed at any time if s/he shows unwillingness to follow the PM's orders. During BNP's immediate past rule, the president was actually forced to resign.

Given that the PM alone, under the existing system, is in a position to exercise unlimited executive power over the state without any hindrance, this by practice becomes a dictatorial rule.

All social evil subsequently surface as a natural consequence. Consecutive road and rail accidents, fire in factories, collapse of under construction building, bridge etc. and enormous number of deaths due to similar accidents, increase of violence, terrorism and extortion, forgery and other irregularities in financial sector, and the spread of corruption in almost all spheres of life are consequence of an absence of good governance that initially surfaced due to an abuse of unlimited power without accountability.

The scenario of violence between political parties and alliances just before the last tenure ended is being repeated this year. Incidents this time have more intensity with bigger casualties. In addition, a sharp division has been created in the country among supporters of secularist and Islamics.

Moreover, the Savar disaster that resulted in more than 1,000 deaths of garment workers sparked concern of the international community about worker's rights and working conditions along with a violent protest from readymade garment (RMG) workers. All this has put the future of an important export sector, vital for our economy, to great risk.

Nobody is sure where all this will end. These are evils of autocracy; a repetition of similar mishaps will not stop until we get rid of it.

THE WRITER IS A CURRENT MINISTER OF COMMERCE.

How long is a day on Earth?

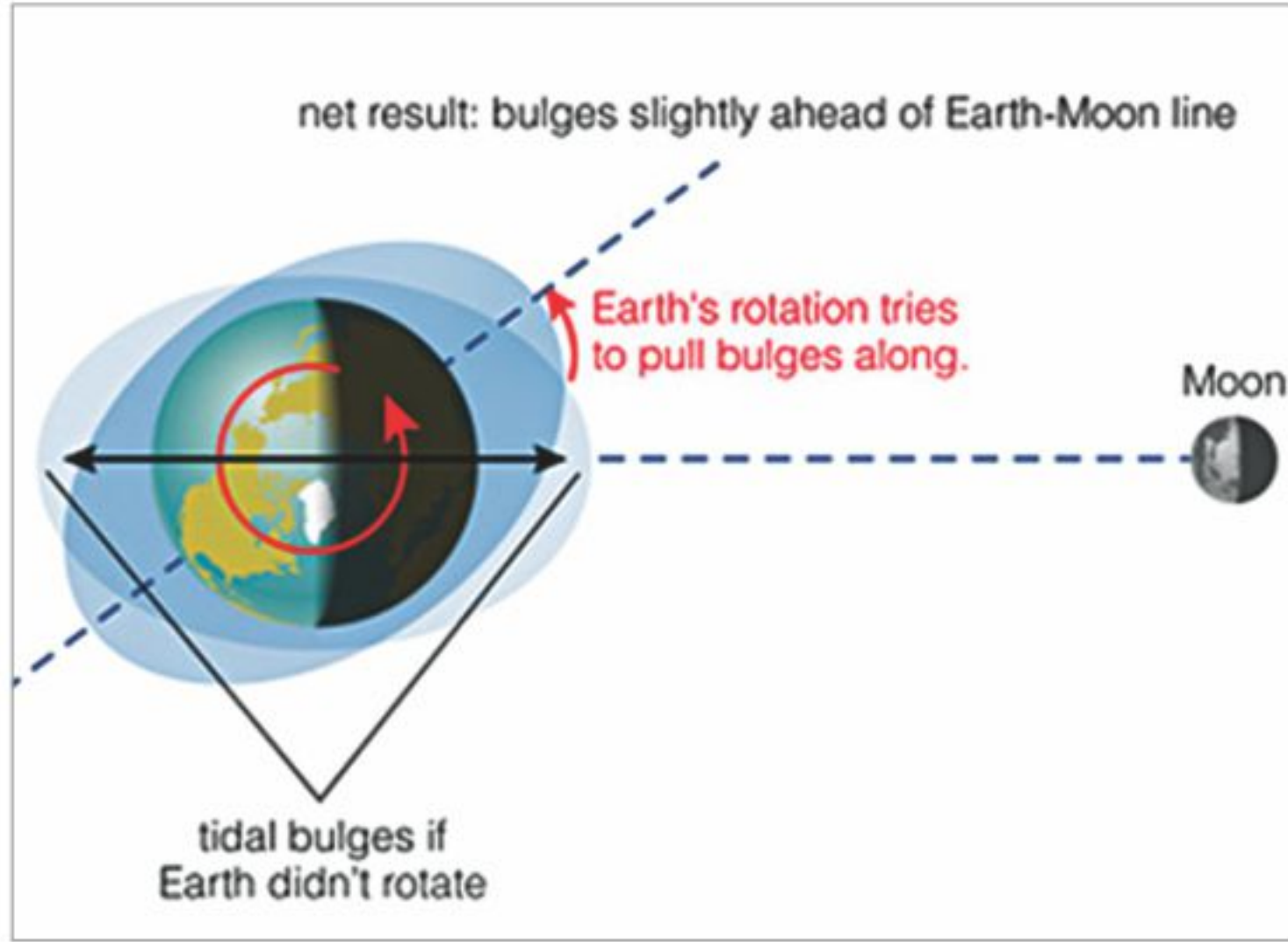
QUAMRUL HAIDER, Ph.D

HOW many hours are there in a day? You may think that it is a trick question; it isn't. The answer depends on how a day is defined. It takes the Earth 23 hours 56 minutes 4.1 seconds to rotate once around its axis. This is called the "sidereal" day. This is different from the "solar" day -- the time from one sunrise to another or the time it takes the Sun to come back to the meridian.

Now, let me rephrase the question: How many hours are there in a solar day on Earth? If your answer is 24 hours or 86,400 seconds, strictly speaking you are wrong. A solar day currently is 86,400.003 seconds, as compared to 86,400 seconds almost 200 years ago. It increases by approximately 40 nanoseconds per day due to the complex gravitational interplay of the Moon and Sun with the Earth. The number may look insignificant having little or no effect on our daily life, but it is part of a large-scale astronomical process with important long-term effects.

Whenever an object is gravitationally attracted toward another, various parts of the object feel gravitational forces differing in strength and direction because the force is inversely proportional to the square of the distance between the objects. The differences in gravity which occur in an object being attracted by another are called Tidal Forces or Differential Gravitational Forces.

The Earth is caught in the middle of a gravitational tug-of-war between Sun and the Moon. The gravitational force exerted by the Sun on Earth is much greater than that of the Moon, even though the Moon is much closer. This force is responsible for keeping the Earth on its nearly circular orbit around the Sun.



However, Moon's tidal force on the Earth is greater than that of the Sun. This is because the tidal force, in contrast with the gravitational force, decreases as the cube of the distance between two bodies. Being closer, the Moon wins the tug-of-war as far as tidal forces are concerned causing tidal bulges in the oceans and distortion of the Earth's rocky surface. The latter is known as Solid Earth Tide.

The Earth rotates about its axis much faster than the Moon revolves around the Earth. The Earth's rapid rotation coupled with higher orbital speed drags the tidal bulge forward of the Moon's orbit. But the Moon's gravitational attraction is trying to put the brakes on our spinning planet and pull it backward. Consequently, Earth feels a resistance, similar to a resistance encountered by us when we try to walk through water. The net result is the tidal flow of ocean water together with the flexing of solid earth gives rise to tidal friction. It pulls the line between the tidal

bulges ahead of the line between the centers of the Earth and Moon.

Tidal friction slows the Earth's rotation resulting in longer days and months. At present the length of a day increases by 0.0015 seconds per century. At this rate for example, the length of a day 100 million years from now will be 24 hours 25 minutes. To keep the day consistent with atomic clocks and astronomical observations, every 18 months a leap second is added to the Coordinated Universal Time.

The rate at which the length of a day increases changes from century to century. When Earth was created 4.55 billion years ago, the day-night cycle was only 6.5 hours. At the beginning of the Cambrian Period about 600 million years ago, days were 21 hours long, whereas in the early Carboniferous Period some 350 million years ago, a day lasted about 23 hours.

Today Earth's slowing rate is higher than what it was millions of years ago. This is due to resonance of the present rate of rotation with the back-and-forth movement of the oceans.

How long will it take Earth's rotation to slowdown to the point when the day will be a month long? Billions of years, may be. Before that happens, the Sun will probably evolve into a Red Giant and engulf both the Earth and Moon. Tidal friction is also making Earth recede from the Sun, but scientists are not sure whether the Earth-Sun distance billions of years later will be large enough to save us from destruction.

"What other body could pull an entire ocean from shore to shore? The moon is faithful to its nature and its power is never diminished."

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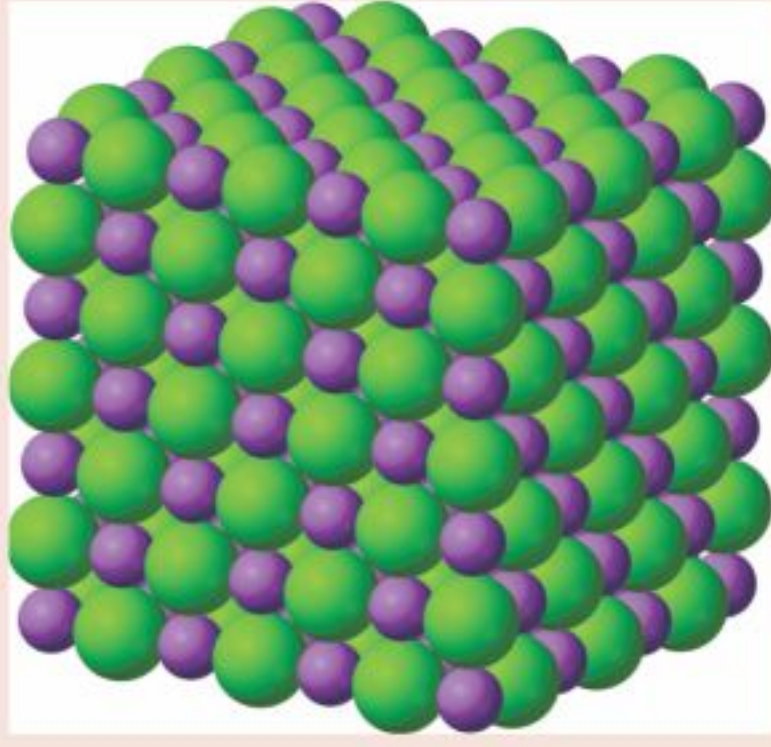
DID YOU KNOW?

What is crystal?

THE scientific definition of a "crystal" is based on the microscopic arrangement of atoms inside it, called the crystal structure. A crystal is a solid where the atoms form a periodic arrangement.

A crystal structure (an arrangement of atoms in a crystal) is characterised by its unit cell, a small imaginary box containing one or more atoms in a specific spatial arrangement. The unit cells are stacked in three-dimensional space to form the crystal.

The symmetry of a crystal is constrained by the requirement that the unit cells stack perfectly with no gaps. There are 219 possible crystal symmetries, called crystallographic space groups. These are grouped into 7 crystal systems, such as cubic crystal system (where the crystals may form cubes or rectangular boxes, such as halite shown at right) or hexagonal crystal system (where the crystals may form hexagons, such as ordinary water ice).



Molecular structure of crystal.

SOURCE: WIKIPEDIA



NANO FLOWER

Micro-sculptures made easy

THE art of growing tiny, intricate floral structures has become a science. Researchers can now grow fields of complex little mineral structures on demand. The process could lead to chemical tricks that halt the growth and movement of bacteria.

When minerals emerge from solution as dazzling crystals, their shapes are often as much about luck as planning. Another way to make small structures is to etch them from large pieces of material, a process that's laborious and expensive. Now a team from Harvard University has shown how to easily orchestrate the growth of specific structures just by changing the local environment in solution.

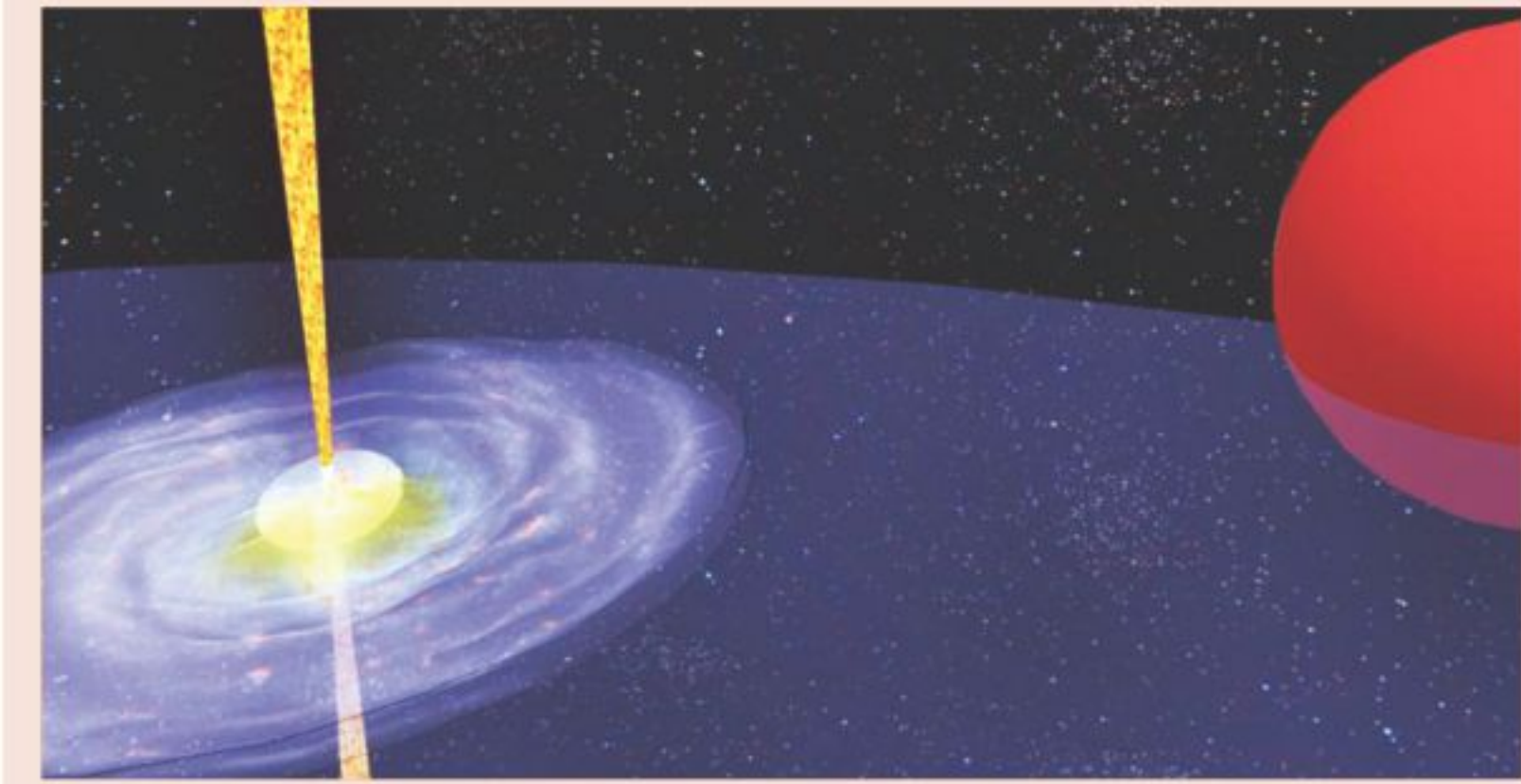
"You tell me what dial in your structure," scientist Joanna Aizenberg says. The researchers start by putting a glass plate in a beaker containing water, a salt (barium chloride) and liquid glass (sodium metasilicate). These minerals precipitate onto the plate in shapes dictated by variables such as temperature and carbon dioxide concentration. To build a miniature tulip, for example, the researchers add some table salt to the solution, and the minerals precipitate as a dome shape, about 25 micrometers across at the base. This spurs new chemistry that prompts slender stems to emerge. When Aizenberg's team lets a little carbon dioxide diffuse into the solution, the stems bloom into dainty cups, the team reports in the May 17 Science.



SOURCE: SCIENCE NEWS



BINARY WORLD



New window to universe

An artist's impression of the Circinus X-1 system showing the binary (double) star system. Two stars orbit each other every 16.5 days in an elliptical orbit. The small white sphere is the neutron star -- an extremely dense and compact remnant of an exploded star, only about 20 km in diameter. The red sphere is an ordinary star -- the companion star in this system. When the two

stars are at their closest, the neutron star pulls material from its companion star.

An accretion disk (the blue disk) forms around the neutron star, containing the matter that is sucked from the ordinary star. Powerful jets of material (the orange rays) then blast out from the neutron star at close to the speed of light, causing powerful flares in radio frequencies.

SOURCE: SCIENCE DAILY

ACROSS

1 Salary
4 Homer's outcry
7 Duck
12 Position
13 Exist
14 Eye
15 Grecian vessel
16 Syrian capitalist?
18 Encountered
19 Step
20 Boast
22 Compass pt.
23 Distort
27 Paul Newman movie
29 Crooner Vic
31 Dope
34 Steer
35 Maiden
37 Needle-fish
38 Bat a gnat
39 Praise in verse
41 Young horse

DOWN

1 Downright
25 Conclude

Solution time: 25 mins.

ARROW MOOSE SLAY
POI OBOE COVE
PINT SIZE AGOG
GUT ERE LONG
CASTLE SARP
LIT YAM RELAY
ORZO TAZ OLIVE
DYRIS ALE FLEW
PAPE WAGERS
ACTYLS WAS
UGLT DOWN SIZED
OREO ERIE ZED
SAWN REND ENS

Yesterday's answer 4-12

CRYPTOQUIP

A Z C Y M Y I F K I N C K J V R K
A M Y K R K I T V R K C Y K I N G R V B
I Y Z V R B I N F G K C J, Z C J C M T T S
R Z I G T H G R C C S C - K G Y C R .

Yesterday's Cryptoquip:
YOU MUST ADMIT THAT THE GUY WHO INVITED THE VERY FIRST MOTOR HAD AN AWFUL LOT OF ENGINE-UNITY.

Today's Cryptoquip Clue: Z equals H

BEETLE BAILY by Mort Walker

HAVE A NICE DAY, DEAR
EASY FOR YOU TO SAY

HENRY by Don Trachte

YOU DON'T HAVE A 10 A.M. TEE-OFF TIME

10-1

QUOTABLE Quotes

Martin Luther King, Jr.

"Nothing in the world is more dangerous than sincere ignorance and conscientious stupidity."