Celebrating the ordinary

Exceptionalism comes easily to South Africans. We are used to living in a country with wonderful weather, spectacular scenery, and the richest collection of mineral wealth in our ground. There is no other country in the world where you have two Nobel Peace Prize winners who lived in the same street. We are the Rainbow Nation of Desmond Tutu; the country where Gandhi formulated his ideas of passive resistance; and the people led by Nelson Mandela that practised reconciliation instead of a civil war. Johannesburg is the city where all of these great leaders lived and worked; it is also the location of the world's greatest deposit of gold; and is even claimed to be the world's largest manmade urban forest. I was born in Germiston (now regarded as part of greater Johannesburg; both cities were founded in 1886), and I grew up feeling proud of the accomplishments of the industrialists of my father's generation. The city was home to the Rand Refinery (the world's largest refinery of gold, which has refined 30% of all the gold mined in the world since antiquity), and the largest railway junction in the Southern Hemisphere.

South Africa, as a country, does not do things in half measures. For a few decades in the 20th century, South Africans were pariahs because of our discriminatory apartheid laws, then during the Mandela years we went to being one of the world's favourite nations and were a shining example to the world in how to overcome discrimination, and how to unite divided societies. Unfortunately, more recently, our reputation has been sullied and we have become known as one of the world's more violent, lawless, unequal, corrupt, and ineffective countries. Our national psyche seems to demand that we are either at the top or at the bottom of the pile. Surely there has to be a better way – maybe we could try to be just a normal and peaceful place.

The writer of the book of Ecclesiastes (usually assumed to be King Solomon) was someone in a position to test what made for a successful life. He pursued great wealth and found that unsatisfying; he pursued a life of hedonistic pleasures and found that to be like 'chasing after the wind'; he attained great wisdom and knowledge and found even that to be 'utterly meaningless'. Eventually he concluded that the secret to a happy and successful life was to find pleasure in the simple things – a shared meal with friends, the satisfaction of work, laughing together, and enjoying the beauty around us – a celebration of the ordinary. Despite this really good advice, we do seem to pay special attention to people who achieve first place and to things that are bigger or better than other things like them.

Charles Schulz, the creator of the *Peanuts* comic strip said 'Nobody remembers who came in second'. Andrew Carnegie said something similar: 'The first man gets the oyster, the second man gets the shell'. Most people I know will remember that Neil Armstrong was the first man who walked on the moon, but it is probably true that fewer will remember that it was Buzz Aldrin who was the second, and even fewer still that Pete Conrad was third. By the way, all three of these astronauts were born in the same year, 1930.

If you drive to the top of Northcliff Hill in Johannesburg, apart from the spectacular view of the World Cup soccer stadium to the south and the Sandton skyline to the north, you can see a signboard that states 'At 1807 metres above sea level the ridge is only 1 metre lower than the highest point in the Johannesburg municipal area'. Being of a curious turn of mind, I find this kind of statement drives me to distraction. I think that it should be against the law to say what is in second place without saying what is in the first place. After seeing this sign for the first time, it took me a little while to find out what the actual highest point of ground in Johannesburg is. In case you are wondering too, it is on the Observatory Ridge (to the east of the city centre), just above the site of the old observatory and the home of some technical societies.

That got me thinking about how things are measured and ranked. Many lists and rankings are contentious because they don't make explicit all of the factors that are included in the evaluation. Even if the factors are listed, different people might weight them differently.

For example, Victoria Falls is undoubtedly one of the world's greatest waterfalls. Yet it is not the highest. That honour belongs to the Angel Falls (979 m) in Venezuela, followed by the Tugela Falls (948 m) in South Africa. It is also not the widest; that title belongs to Iguazu Falls (2700 m) between Argentina and Brazil. It also does not have the largest mean annual flow rate; which goes to Niagara Falls (2407 m^3/a) between Canada and the USA. What distinguishes the Victoria Falls (apart from its spectacular natural beauty) is that it is the largest falling sheet or curtain of water in the world, being 1.7 km wide and with a single drop of 108 m.

The largest lake in the world is also subject to definition. If saltwater lakes are included, then the Caspian Sea is the largest by surface area and by volume, but if we restrict the category to freshwater bodies only, then Lake

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Superior (North America) has the largest surface area (followed by Lake Victoria in Africa), while Lake Baikal in Asia is the largest by volume (containing approximately 20% of Earth's fresh surface water), followed by Lake Tanganyika in Africa. The deepest lake in the world is Lake Baikal, followed by Lake Tanganyika, then the Caspian Sea. So, if anyone asks me the ambiguous question 'What is the largest lake?', they will get quite an earful in response.

Even greater complexities occur when rating universities. This month saw the release of a list of 1000 top universities worldwide by the Center for World University Rankings (CWUR). The South African universities included in this list were the University of the Witwatersrand (176th), University of Cape Town (265th), Stellenbosch University (329th), University of KwaZulu-Natal (467th), and University of Pretoria (697th). This is quite impressive, given that there are approximately 20 000 universities internationally. The factors taken into account include quality of education, alumni employment, quality of faculty, publications, influence, citations, broad impact, and patents. The highest scoring position of these universities went to Wits University, being rated 35th in the world for alumni employment.

There are numerous university ranking systems, each with a different emphasis. Four of the most prominent are the Times Higher Education (THE) World University Rankings (perhaps the most widely accepted), the CWUR, QS World University Rankings, and the Academic Ranking of World Universities (ARWU/Shanghai). Earlier this year, the THE ranking of South African universities showed UCT (1), Wits (2), Stellenbosch (3), UKZN (4), Pretoria (5), and Unisa (6). The top five universities appearing in both these lists also appear in the top five positions in the QS ranking. These institutions are well known for providing graduates to the mining and metallurgical industries.

South Africa was once overwhelmingly dominant in gold production. However, this was achieved at a high social cost, with the introduction of the migrant labour system that has been so damaging to large portions of our society, and we continue to reap the cost of this today. In recent years, South Africa's gold production has decreased as many mines have become depleted, and the remaining ores are deeper, and extraction of the gold has become more expensive. South Africa no longer holds the dominant position it once did in gold.

Chromium (seen as essential to the production of stainless steel) is another element that South Africa has in great abundance. South Africa's chromite reserve base has been calculated at more than 70% of the world's total. World production of chromite is dominated by South Africa, with Kazakhstan in second place. Chromite production clearly depends significantly on what is in the ground, but is also affected by policies and infrastructure development within a country, as can be seen by the significant increase in chromite production in Turkey, and the significant decline in chromite production in Zimbabwe during the past decade.

Ten years ago, 90% of the chromite that South Africa produced was converted to ferrochromium (FeCr) in South Africa, making SA by far the world's largest producer of this ferro-alloy. China, by comparison, has very little chromite, and has to either import it (much of it from South Africa) to produce FeCr, or has to import the FeCr necessary for its stainless steel production. Thirty years ago, China was in seventh place for FeCr production, producing only 120 kt/a. By 2006 (ten years ago), China's FeCr production had grown to 1.0 Mt/a, and they had moved up to third place (after South Africa with 3.0 Mt/a, and Kazakhstan with 1.2 Mt/a). China continued to grow rapidly, and South Africa's production of FeCr declined as a result of power shortages and higher costs. China overtook South Africa as the world's leading producer of ferrochromium in 2012. I suppose that the question has to be asked whether it really matters if our country is in first or second place, but it certainly does matter whether the minerals in the ground contribute in the best way possible to the prosperity of the people of our region.

The Greek historian Polybius said: 'Those that know how to win are much more numerous than those who know how to make proper use of their victories'. I hope that the mining industry in southern Africa will strive towards making 'proper use' of our natural resources to the benefit of our people.

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