

Commentary Paper

Statistics in politics: From skiing on the broad and the smooth to the serrated side of the saw

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Harry Truman the World War II President of the United States said this about his career choices "... My choice early in life was either to be a piano player in a whorehouse or a politician. And to tell the truth, there's hardly any difference." the President of South Africa Cyril Ramaphosa says at times parliamentary debates bear no difference from those in a beerhall. What then could be the role of statistics in this rather murky world of politics that have the same difference as a whorehouse or beerhall?

The profession and life of statisticians is facing ever increasing leadership demands including career threats as the paradigm for evidence-based decision making becomes apparent, and places decision support systems and decisions – that is statistics and politics – at the apex of the being of society. Statisticians therefore no longer have the comfort and luxury of working in isolated and rarefied spaces from whence they monopolize whatever technology there is and throw their toil over the wall for policy to catch and for they, the policy makers to try and make sense of the complex Pandora box of statistics. Technology has diffused the clear cut era of a Chinese wall between statistics and policy and the end of this classical manifestation of a wall is nigh. Through technological advances, the nexus of numbers and space have now been solved and become a tool for facilitating collaboration across society. A three dimensional world is now in the hands of everyone. But more importantly a four dimensional reality is within reach of society as time can now be factored on the fly into the material world. The sci-

ence of where – location – which is the heart beat of politics, has caught the quiet and quite unprepared and underprepared statisticians. This has catapulted them to the high table of society – the murky world, captured so succinctly by the World War II President of the United States, Harry Truman and Deputy President Ramaphosa of South Africa – the world of political numbers where there is no difference between the whorehouse cum beerhall and the world of politics. This is where they, the statisticians have to first make sense of not how society should be organized but the reality of how society has decided to organize itself – the subject of human endeavour. This is in order for statisticians to shed light on how sustainable development goals can be achieved by providing platforms for description, analysis, diagnostics, prediction, prescription and adaptation. These crucial stages of statistical measurement can no longer be undertaken in rarefied environments as they imply continuous engagement amongst decision support systems-statistics – and decision making – politics.

The question then is do statisticians appreciate and understand the policy imperatives? Are they alive to the attendant risks of being political and partisan or perceived as such when they inevitably have to relate and actively engage the discipline of decision support systems to that of decisions? Are politicians, policy practitioners and society alive to the dilemma that statisticians and conveyors of decision support carry and confront in the emergent and new normal? Helmut Spinner addressing the statisticians in the Economic

Commission for Europe addresses this dilemma. He made some profound observations about the purveyors of information and the risk profile of each in the information market place. In this regard he provided a succinct narrative of interpretation of statistics and decisions. He profiled the responsibilities and risk profiles of statisticians, scientists and politicians in the production, understanding and application of evidence. He then poses the question of what world in relation to the production and use of evidence. He comes to the conclusion that the world where information is power is one we are moving into. He however goes on to argue that such a world is where freedoms of citizens are guaranteed, literacy and competency levels for choice are progressively enabled and assured and information is available to everyone, available everywhere and available simultaneously. Like Rosling, Spinner is acutely aware that the precondition of such a world where information is power is where there is a clear distinction and choice of actions. The decisions should be driven by a fact based information and knowledge world view.

Statistics is about evidence, politics is about decisions. A plan formalizes the relationship between the disciplines of evidence and decisions. Technology is the matrimonial platform where the vows about consummation of conjugal obligations of evidence and decisions are facilitated, taken and performed. The paper equates the new and emergent task of statisticians in the sphere of evidence-based decision-making as one from skiing on the broad, smooth and safe surface of the saw to one where the statistician is skiing on the serrated side of the saw. Thus making statistics a career carrying immense risks. The paper asserts that a successful interface of statistical evidence and political decisions comes about through maturity in leadership in an accountable and democratic state.

New terminology in the world of technology and concomitant abundance of data imbue concepts such as big data, citizen science, alternative facts and fake news. Daniel Moyen, the United States Senator warned us that you may have your own opinions but not your own facts. Yet in the hands of citizens today are personal sensors that citizens use to make true observations about themselves – how they walk, talk and associate. Own facts are increasingly a possibility which generates own views about phenomena. Crowd sourcing facilitates that tweets generate a reality – whatever the fundamental facts are or should be, whichever way these have been created, whether machine generated or otherwise. The distinction between the corporeal and

virtual world has become difficult to discern. Sensors are some of the instruments generating massive, real-time and high variety data with the potential of overwhelming statisticians and politicians alike. The statistician no longer has the luxury of time and excuses to organize data into statistics as the politician and policy maker has access to the deluge of data and would-be-suitors at hand. And these suitors are very likely pretenders to replace statisticians. The late Hans Rosling, and driver of a fact based world who believed in the authenticity and authority of official statistics argued fervently that statisticians have to reveal the beauty of statistics. In this regard he spurred statisticians into story telling which is and will and should be a new normal for statisticians. By so doing statisticians have entered a new terrain of transformation where the interface with political and policy systems is unavoidable – the safe dance and skiing on the broad and smooth side of the saw no longer exist. The game has changed for statisticians. They have to ski on the serrated side of the sword. The famous physicist, Geoffrey West argues quite correctly that unbounded systems can only survive through continuous innovation but whose speed is accelerating in time, if the system is to avoid collapse.

In the presence of all these, can statisticians stand aside and request or still demand the safe space they have always enjoyed for undertaking the so called objective work? Or should they metamorphose into a different layer of competency? This is whereby they organize what objectivity is. Where in this case it has to be defined as engagement and openness rather than distance and non-contamination. Do the United Nations Fundamental Principles of Official Statistics afford the practitioners the space to do so?

The real world is fast being infiltrated by a parallel world – a virtual world. This threatens to replace it. Have you ever wondered why you need a twin? Each time you appear in real material world, the banks, society, schools, governments require to know whether you are who you are? The virtual twin is tied to you all the time and augmented reality has branded this as the new normal.

Measurement tools abound, scanners at trading entities generate real time consumer price indices and much more is to come with machine learning and artificial intelligence and this includes robotics. Now casting is pushing official statisticians in the space of forecasting. Availability of data is inevitably collapsing time from a rear mirror view of what has happened to what is happening and what is about to happen. It is a world where never before have the process of descrip-

tion, analytics, diagnostics, prediction and prescription are collapsed in time, and demands on adaptive capability are high. This is a strange ecosystem for official statisticians. Can official statisticians continue to occupy a safe corner? That certainly cannot be the case. They are called upon to engage and take the risky steps of existing in a new world of objectivity, as defined by Munchhisen – where a fundamental quality of objectivity is defined as engagement and not distance, where bootstrapping and jackknifing as common statistical techniques resonates with self-validation, rather than the eye of the beholder, which behooves an external validation.

Do the United Nations fundamental principles of official statistics continue to hold in this environment? They more than ever do as the deluge of data and ideas can soon dissipate in the absence of standards and ethics. The nexus of a new paradigm facilitated by technology tools brings citizens closer to their democratic privilege of choice whereby standards and ethics generate trusted time series. The dialectical articulation of these processes define the competency and the person of the new official statistician who should and can interface with politics. It is a qualitatively new paradigm which articulates the power of information as an instrument for engagement and collaboration in solving problems of the world. It presents the world of opportunities for visibility of value in statistics and its use. It is ready for the picking but it requires that statisticians have an appetite for risk.

What has this world been as experienced by official statisticians and national mapping authorities? With the advent of the SDGs, statisticians have been called upon by policy makers to generate indicators that have a fundamental attribute of leaving no one behind. This notion has excited those immersed in technology and as this happens, technology has run ahead of measurement standards. It is as such forcing measurement to catch up. In areas, it has suggested that the fundamental tasks of national statisticians and national mapping authorities can be replaced by technological enhancement and advancements. Some have paraded data science as a discipline ready to replace national statisticians and national mapping authorities. Others have

been so enthused by this that they curry favour with political authorities in countries and sideline national statistics authorities and national mapping authorities. This approach portends a zero-sum approach to development. No doubt national statistics authorities and national mapping authorities have acquired a deservedly bad label of being slow and unimaginative. This stigma is not going to go away if these national authorities be they statisticians or mapping authorities sulk and do not step up to the plate and act on the stigma. Importantly if statisticians and geographers fail to realize that they are genetically connected as Siamese twins, they are doomed to be extinct. However, the lacklustre behaviour of national statisticians and mapping authorities notwithstanding not much can and is going to be achieved by new technologies if the fundamental work of standards which official statisticians hold through the United Nations Fundamental Principles for Official Statistics is not transformed. Statistical analysis software, SAS, long recognized this requirement and has always partnered and researched with national statistics agencies, although a number of these institutions have always complained about the price tag of SAS. One important initiative that is coming up is by ESRI where the official statistics community are feeling one another with ESRI on the federated SDGs focusing mainly on the science of where and leaving no one behind. The power of a four-dimensional world in the hands of citizenry holds promise for facilitating objective measurement that holds us as society to account. This to my mind defines the new official statistician, who will be confident and comfortable dancing on the serrated side of the saw knowing that s(he) is on the right side of history leading transformation rather than an insecure one playing on the safe, broad and smooth side of the saw unaware that s(he) is facing extinction. This paradigm shift in measurement can correct and differentiate beerhall debates from parliamentary debates, a career of playing a piano in a whorehouse from politics. This is because politics informed and intersecting with measurement and credible and coherent decision support systems hold greater promise to transform society positively and deliver the SDGs.