A CREATIVE PROBLEM-SOLVING (CPS) PERSPECTIVE ON THE GLOBAL RESPONSE TO THE ONSET OF THE COVID-19 PANDEMIC

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Abstract

In December 2019, the world woke up to a new virus in China, which later spread internationally, prompting the World Health Organisation to declare the novel coronavirus (Covid-19) infection a global pandemic. This pandemic prompted various individuals, organisations, governments and local and international agencies to proffer solutions. Unfortunately, these efforts were focused on traditional western methods of tackling diseases and crises of this nature. Other alternative methods of problem-solving were rebuffed or outrightly repudiated. There seems to be no wide-ranging recourse to creative and innovative approaches for solution-finding. The resultant effects were the loss of millions of lives, unprecedented global lockdowns, economic hardship, health challenges, insecurity and other allied issues occasioning a disruption in the world order. While vaccines have been found with conflicting debates, the world is still reeling from the aftermath of the Covid-19 pandemic. This paper argues that a creative approach to resolving the pandemic at its onset would have forestalled the loss of lives, the global economic meltdown and the disruption of lifestyles. Consequently, it calls for more inclusive problem-solving approaches to national, regional and global crises.

Keywords: Covid-19, Problem finding, Problem-solving, Creativity, Innovation, Lockdown

Introduction

"If you source more perspectives and views, you'll have a better chance at a good answer."

- Roger Martin

The novel coronavirus, Covid-19, entered the world in December 2019. By early 2020, it had spread from Wuhan, China, where it first appeared, to other parts of the world. This global spread which was swift and uncontrollable, caused the World Health Organisation (WHO) to declare the situation a global pandemic on March 11 2020 (WHO, 2020). After the declaration, there was a flurry of activities by countries, researchers, corporate bodies, non-governmental agencies, pharmaceutical industries and individuals to find a quick solution to the crisis, which soon led to the death and hospitalisation of millions of people globally. As of 2021, the World Health Organisation (WHO) reported that over 497 million cases of coronavirus infection resulted in the death of 6.1 million people globally (Oman, 2021). While some progress has been made in the understanding of how the virus works and the debilitating effects it leaves, one cannot categorically state that the repository of knowledge about the virus is sufficient to stem the tide of the spread of the virus globally in future (Fiolet, Kherabi, MacDonald, Ghosn & Peiffer-Smadja, 2021). Instead, what seems to be trending is restrictions and persistent infection.

Consequently, despite the numerous gains made in the fight against the virus and its spread, it could be suggested that there is no end in sight. Nevertheless, it would be unfair not to acknowledge that the multifaceted efforts at curing and stopping the spread of the virus have yielded tremendous positive results. These positive results give hope that soon, a cure will emerge. Further, the progress in the fight against the virus can be attested to by developing safety protocols to prevent the spread of Corvid-19. In addition, the discovery of multiple vaccines has slowed the virus's spread and reduced the number of deaths and hospitalisation. Recently, there was a report that a pharmaceutical company in the United Kingdom has developed a pill

that showed an 89% efficacy in treating people who contracted the virus. Undoubtedly, the world has made tremendous progress in the fight against Covid-19. Nevertheless, for the sake of the future, there is the need to examine the approach to tackling the Covid-19 pandemic at inception and become more proactive in the future.

Numerous studies have suggested that pandemics have unfortunately come to stay with humanity (Woolhouse, Scott, Hudson, Howey and Chase-Topping, 2012; Parvez & Parveen, 2017). However, despite the so-called conspiracy theories, the incident of Sars-2, otherwise known as the Covid-19 pandemic, has confirmed that humanity needs to become proactive in handling any crisis of global dimensions, whether such crisis is in the area of health or not. This work, therefore, seeks to examine the approaches adopted by the medical and scientific global interest groups in the fight against the Covid-19 pandemic, especially at the onset of the virus. Citing evidence from the beginning of the announcement of the virus in Wuhan, China, to the latest efforts in the discovery of a pill in the UK, this work posits that a creative approach to tackling the challenges posed by the virus could have saved the world millions of lives and resources. These losses include damaged economies, finances, lost jobs and businesses, death of family members and other social and psychological resources. Consequently, this work bases its argument on the Divergent Thinking Technique of the Creative Problem Solving philosophy for Creative and Innovative living.

What is Creativity?

Creativity is a multifaceted phenomenon. It is a skill understood differently by individuals and cultures (Obialo, 2018). This diversity of conceptions has led to much variance in the definitions of creativity and its twin concept of innovation. Nonetheless, there are peculiarities in what people across the globe agree should be referred to as "creative" or "creativity". These commonalities give a general idea about what cultures, groups, organisations and individuals consensually agree should be "creativity".

Consequently, it is generally agreed that creativity is the production of what is novel and valuable. The implication is that whatever is not new and does not add value to the context in which the creative expression occurred cannot qualify as "creative" or an act of "creativity". Furthermore, there is an element of pragmatism in the general understanding of creativity. Essentially, whatever qualifies for the garb of "creativity" must be helpful to both the creator and the environment in which the product of the creative activity transpired. Creativity, therefore, is a beneficial phenomenon for human existence. Puccio (2012) averred, "Creativity is an essential life skill".

Further, a 2010 survey of CEOs of top companies across the world by IBM revealed that creative skill was the topmost skill that these CEOs required from their employees (IBM, 2010). These CEOs and companies cut across all areas of human activity, including the health sector. Undoubtedly, modern civilisation and culture have been shaped by an unprecedented outburst of creativity that our world cannot survive without it. “Creative thinking is essential to the daily functioning of modern human beings and allows for inspirational problem solving, technological and artistic advancement” (Shofty et al., 2022: 1). The question that begs for a serious answer is: What went wrong in the search for a solution at the onset of the Covid-19 pandemic? Did those who should have used the tenets of creativity jettison their celebration of creative skills for something else? Why were the reported isolated creative solutions not considered in the search for a solution to the crisis? One can grow a list of questions in this regard.

Theoretical Framework

Creativity used to be conceived as a skill for a selected few (Obialo, 2018). Later developments proved beyond doubt that every human being is born creative. However, studies and practices revealed that people could be deliberately trained or educated for creativity (Aboluwodi, 2018; Kupers & Dijk, 2020; Zanden, Meijer & Beghetto, 2020). This development gave birth to the promotion of deliberate creativity. Promoters of deliberate creativity have developed rules that

guide and lead to creative and innovative outcomes, irrespective of the contexts in which these rules have been applied (Ravenell, 2017; Cross, 2001). One of these models of creativity is the Creative Problem Solving approach to creative and innovative living. The Creative Problem Solving Process began with the seminal work of Alex Osborn, *Applied Imagination* (Osborn, 1953). In this book, Osborn coined the word *brainstorming* and delineated his process and model for creative problem-solving. The term brainstorming continues to appear in other creativity and innovation models, thus becoming an influential term in the creativity and innovation discourse. At the outset, Osborn introduced CPS as a seven-step model (orientation, preparation, analysis, hypothesis, incubation, synthesis and verification). This initial model has evolved mainly because: "The Creative Problem Solving approach has been one of the most widely used and researched creative process models" (Puccio, 1999: 171).

The Creative Problem Solving (CPS) Model has enjoyed input from several researchers over the years. One of these scholars was Ruth Noller, who defined the Creative Problem Solving as "a process, a method, a system for approaching a problem in an imaginative way resulting in effective action." (Miller, Vihar, Firestein et al., 2011, cited by Lyness, n.d). Puccio, Mance and Murdock (2011: 43) defined the Creative Problem Solving Model as "a comprehensive cognitive and affective system built on our natural creative processes that deliberately ignites creative thinking and, as a result, generates creative solutions and change". Whether one assesses the definitions above from the perspective of "effective action" or "creative solutions and change", or not, one thing stands out: The Creative Problem-Solving philosophy facilitates effective change. The above assertion implies that not all change is effective. Further,

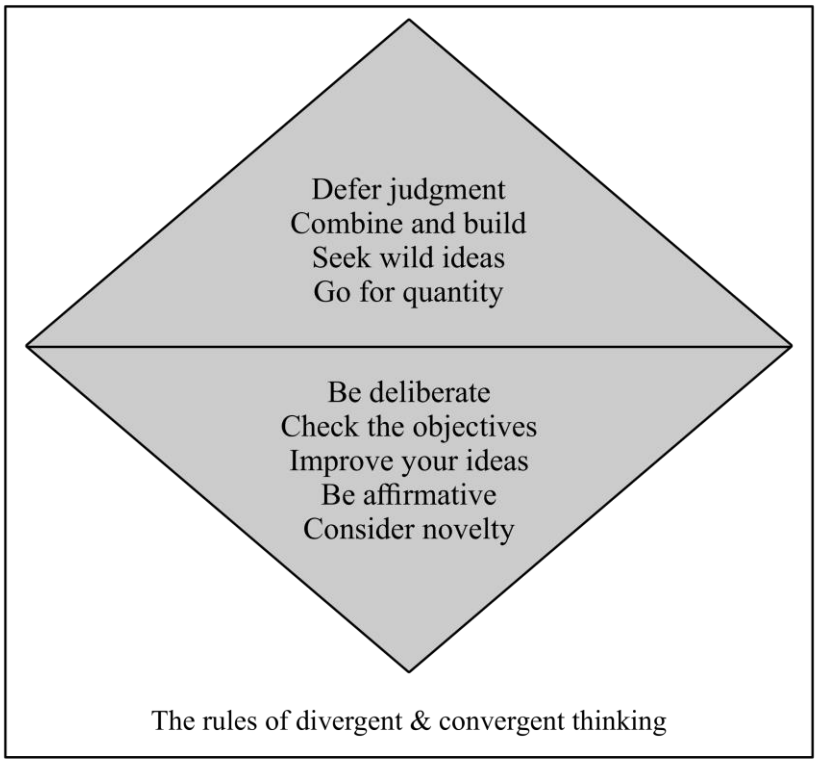
> As a deliberate creative process, CPS takes intuitive responses to open-ended problems and moves them from trial and error to targeted strategies. In accomplishing this, CPS (1) influences how people think about themselves and the world around them concerning change; and (2)

> improves individual and team performance for problems that appear to have no immediate solution (Puccio, Mance & Murdock, 2011: 43).

Looking at the CPS model, one observes the emphasis on three concepts: creative (creativity), problem and solving. By "creative", the model refers to producing what is new, valuable/useful/ practicable. That which is new could be options or ideas on how to solve a problem or challenge. "Problem" for Puccio, Mance and Murdock (2011: 43) refers to "what exists when there is a gap between what you have and what you want". Such a gap occasions disaffection and dissatisfaction, which initiates curiosity in finding a way to close the identified gap. Lastly, "solving" concerns initiating actions to bring about the closure of the identified gap. Solving is finding solutions to situations. That is why it is the implementation aspect of the model. This third part includes all that is concerned with seeking or improving solutions. Creativity goes beyond thinking up new and useful things. "It is the direct result of someone taking action and bringing a new idea to fruition. CPS as a process is about transforming creative ideas into creative solutions for complex problems, thereby leading to productive change" (Puccio, Mance & Murdock, 2011: 44). For Puccio and his colleagues, CPS is a creativity approach that "works for developing the thinking skills related to creativity, which help leaders to effectively respond to predicaments and take advantage of perceived opportunities" (Puccio, Mance & Murdock, 2011: 46).

Dynamic Balance (Stormz, 2021)

The Rules for Divergent and Convergent Thinking



Source: Go Beyond the Basics of Divergent and Convergent Thinking - Stormz (2021)

The CPS model is characterised by a balance of divergent and convergent thinking techniques. The balanced application of these two thinking methods, which runs through the CPS process, ensures that the outcome of any effort at resolving any challenge is always a creative solution. J.P. Guilford created the idea of divergent and convergent thinking to differentiate the types of psychological operations while problem-solving. Divergent thinking produces a diverse mixture of suitable answers to an open-ended question or task,

whereby the product is not entirely determined by the information (Razumnikova, 2013). Divergent thinking concerns generating many alternative responses like original, unexpected, or unusual ideas. That is why divergent thinking is allied with creativity. For Duck (1981), divergent and convergent thinking are two separate poles on a spectrum of cognitive methods for problems and questions. Further, divergent thinking pursues multiple perspectives and imaginable answers to questions and problems. "Typically, divergent thinking resists "accepted' ways of doing things and seeks a variety of alternatives" (McAuliffe, 2016). The bias for one correct solution to any issue finds a resolution in divergent thinking. It assists the ones engaged in thinking to push themselves to the level where they run out of ideas before settling for a possible solution.

However, convergent thinking assumes that every problem has one correct answer and every challenge has one solution. Kim and Pierce (2013) contend that convergent thinking "…begins by assuming that the way things have been done is the right way. Divergent thinkers are better at finding additional ideas, whereas convergent thinkers have a more difficult time finding additional ideas. As a result, convergent thinkers run out of ideas before divergent thinkers". Convergent thinking seeks only the single precise answer, conventional to a definite problem. Ultimately, in CPS, the divergent and convergent thinking process is a complete process that functions together in a dynamically balanced method that provokes novelty to the point where what is unique is developed and utilised.

In consonant with the CPS process's structure, the divergent and convergent thinking techniques have rules guiding their usage. These guidelines have been tested over time and consistently lead those who use them to creative and innovative solutions that bring about desired change, growth and development. The rules are outlined as follows: Divergent Thinking Rules- Defer Judgement; Combine and Build on Ideas; Seek wild and unusual Ideas; Go for Quantity. A cursory look at this body of principles or rules reveals a structure that points to the value of suspending judgment to arrive at a diversity of ideas. Diversity will ensure quantity, and quantity will ensure that a

large pool of ideas will facilitate a selection of the most appropriate and novel solution to the challenges at hand. Puccio, Mance and Murdock (2011: 86) contend that "When you learn to use these principles, your thinking will focus with ease on new possibilities, and your behaviour will demonstrate to others that you are open to new ideas". This position about the divergent thinking rules influenced Obialo's (2017a) contention that the deferment of judgment for him is the essential rule of the whole creative problem-solving process. Furthermore, studies have proven that adherence to these rules by individuals and groups has a significant positive impact on divergent thinking skills (Im, Hokanson, & Johnson, 2015; Obialo, 2017b; Puccio et al., 2018).

Conversely, Convergent Thinking Rules are as follows- Be deliberate; Check Objectives; Improve Ideas; Be affirmative; Consider novelty. At this stage, the emphasis is on examining and evaluating the generated ideas to screen out those that might not provide the desired originality. The outcome of the pruning process forms the basis of the decision that will be made. There is also the possibility of developing or strengthening the outcomes of the scrutiny. This approach and attitude to the screening exercise allow the process to adopt affirmative judgment. The affirmative judgment allows one to carefully consider what is good and bad about the subject of evaluation. Essentially, affirmative judgment allows one to critique an idea as against criticism of an idea. The positive and negative sides of the idea are considered thoroughly before settling on a decision. One must note that: "The net result of screening alternatives based on finding what is wrong leads to the premature elimination of options that might be improved with modifications" (Puccio, Mance & Murdock, 2011: 97). The above reflects the natural inclination of the average human being. The human thinking preference exhibited through habits learnt and acquired over a period favours the choice of constantly criticising whatever idea is before the individual. This option seems to be further encouraged by the various educational systems that pervade global educational systems. These systems structurally inculcate the one-answer culture into all who pass

through them. The products imbibe thus one philosophical system of constantly seeking the one right, correct and acceptable answer to particular problems.

From the delineated rules above, it is noticeable that they form a pattern that encourages anyone who follows the process to arrive at creative solutions to any problem they might be interested in. It is a rule of thumb among practitioners of the Creative Problem Solving (CPS) Model to "Trust The Process". For individuals and groups to benefit from the CPS process, they need to both imbibe it and trust it to lead them to the novel, creative, innovative and transformational solutions that unusual problems and challenges throw up. When unusual challenges emerge, the repertoire of experience cannot aid people in their attempts to resolve these problems. Individuals with a creative mindset are conscious of the limitations of the old body of knowledge and so resort to unusual ways to solve the knotty problems.

The history of the human race is replete with pandemics (Penn, 2021). There is no doubt that the emergence of the Covid-19 virus and its attendant global crisis was a novel experience which shook the entire world to its foundations. The attempt to find a solution was devoid of any inclusive search outside the powerful western and developed countries. There were cases of possible cures found in Africa. Unfortunately, some were jettisoned. Others were labelled placebos. All possible ideas for a cure that came to Africa were not given any opportunity to thrive. However, it is common knowledge that research and development of cures involve trials and errors. This is simply judging or placing judgment on a possible solution because these sources were from those who did not belong to the usual sources of solutions to global challenges. One may thus ask why and if Africa has not been accepted as an integral part of the world that can contribute positively to the global health conversation.

A CPS Analysis of the Global Response to the Covid-19 Pandemic

It is no longer news that Covid-19 wreaked havoc globally. It is also common knowledge that there seems to be no comprehensive understanding of the Covid-19 virus. While various vaccines have been discovered and administered successfully globally, there are still some concerns about the enduring efficacy of the vaccines, among other issues globally (Brinson, 2022; Lobinska, Pauzner, Traulsen et al., 2022). This uncertainty reflects in the multiple shots currently being administered to people as vaccinations. However, it must also be acknowledged that despite some reservations from some sections of the world, these vaccines have succeeded mainly in curtailing a global disaster that could potentially wipe out the entire human race (Watson et al., 2022; Henry, Jones, Stehlik & Glasziou, 2021).

Nevertheless, a significant number of people are yet to be vaccinated, thanks to the strong conspiracy theories and other issues that have made it very difficult for some people globally to freely access the various vaccines paid for and provided by numerous governments (Lazarus et al., 2022; De Coninck, 2021). Moreover, some world celebrities seem to be champions of no vaccination for very discrete reasons. These people have not been reported dead, and neither did their locations reported to have experienced death in the proportions reported elsewhere. Apart from that, the advent of the Covid-19 virus elicited some scary, atrocious and uncharitable pronouncements about the fate of the African continent (Berhan, 2020; Pearson et al., 2020; Economic Commission for Africa, 2020; Lone & Ahmad, 2020). It is highly suggestive that some people are yet to take the vaccination despite the global outcry that resulted in the deaths of millions. It is also a cause for deep reflection that Africa did not experience the large-scale calamity that health experts and global organisations predicted at the onset of the Covid-19 pandemic. So far, Africa is the least vaccinated of all the continents for both known and uncommon reasons (Ackah et al., 2022; Adejumo et al., 2021). Despite this, Africa has continued to record low Covid-19 infection (Hulland, 2020). This fact provides another reason to think

outside the status quo. Consequently, there is a need to examine the initial response by the global community to the outbreak of coronavirus infection in the light of the Creative Problem Solving (CPS) process.

It is imperative to recall that the CPS is a system of thinking that combines divergent and convergent thinking to think up creative solutions to life's challenges, no matter the context. Such solutions are usually novel and beneficial, resulting in creative outcomes that have never been tried. For example, when the coronavirus infection was declared a global pandemic, efforts were made to develop treatments and vaccines. The western world championed the race to solve this global health challenge, and concentrated only on the development of vaccines and other western style treatments as the only solution to the debilitating disease. This approach was against the spirit of Divergent Thinking, which emphasises the need for anyone looking for a novel and, therefore, creative solution to any unfamiliar challenge to suspend or defer judgment. At the onset of the virus, the dominant idea and attitude were that vaccination was one of the most promising countermeasures to Covid-19 (Frederiksen, Zhang, Foged & Thakur, 2020). Unfortunately, this idea influenced all efforts to resolve the Covid-19 pandemic regarding treatment measures and vaccine development. Such an attitude foreclosed the possibility of other alternative solutions to the then-emerging global health burden.

There have been reasons for the one approach to the discovery/development of vaccines. Some of these reasons border on the economic, political, technological and financial (Nair & Peyton, 2022). This approach robbed the world of a quick solution to the Covid-19 crisis. Any approach that is fixated on one way of resolving problems robs itself of the opportunity to arrive at a novel solution that will endure. Such an approach obsessing on a one-solution attitude forecloses the possibility of including other methods of solving problems or trying choices or alternatives that might not have been investigated hitherto. Such a methodology denies the world the prospect of inclusion. Albert Einstein is reputed to have counseled: "We cannot solve our problems with the same thinking we used when

we created them" (Einstein, n.d). Unfortunately, this advice from a genius was jettisoned at the onset of the pandemic. If the virus was discovered or, to borrow from the context of Einstein's wisdom, "created", it was only wise to depart from the mode of operation that birthed it. That is why the first law of divergent thinking becomes relevant. The law instructs that there must be a deliberate push to defer judgment in the quest for creative solutions. A non-judgmental mindset will ensure that people engaged in solution-finding would stretch their imagination to the extent that all possibilities are accommodated without judgement or condemnation. Even when ideas sound stupid, ridiculous, laughable, or the like, they are not jettisoned but accepted and affirmed as potential breakthrough ideas until proven otherwise. The sources of such ideas are also never criticised, ignored or despised. There is, therefore, a level playing field for all ideas and all owners of the ideas to thrive. The potential of any idea or solution to bloom and become the breakthrough answer is the kernel of this law/technique.

Tarrant (2021) explains that divergent thinking is a form of flexible thinking that lets the individual comprehend a situation from many perspectives. Judgment and self-criticism are overlooked as one searches for novel sources of inspiration and new partnerships to achieve something. Essentially, the quantity of new ideas is more significant than in convergent thinking, and the highlight is on the complete picture of a situation, problems and ideas. Anyone who imbibes and becomes comfortable with this way of thinking thrives in confronting unusual life challenges. Such a person becomes unconsciously creative and becomes a change agent. The global health community's initial response to the crisis reflected a deliberate rejection of ideas outside the western and developed world. There was a halfhearted response to possible solutions from outside the developed world.

Eclectic Pieces of Evidence Supporting a CPS Approach to Solution Finding at the Onset of Covid-19

Use of Herbs

The use of herbs to treat ailments goes back to the advent of man. Herbs are used alongside western medicine to treat diseases in Africa and other developing continents. There is a new love for nature as the source of cure that has no side effects in managing and treating various diseases. Though the use of herbs in medical practice has not been standardised in places like Nigeria and other African countries thereby facilitating abuses, herbs have become a veritable source of cheap and affordable treatment options that appeal to millions of Africans. The attraction and faith in the efficacy of herbs to treat several ailments inform the inappropriate use of a combination of both herbs and chemical-based therapies to treat even common ailments. A typical example is how the average African looks to medicinal plants that are commonly known to cure malaria for a solution when attacked by malaria. This practice is common among both educated and non-educated alike.

Specifically, in Madagascar, a herbal tonic developed by the country's Malagasy Institute of Applied Research (IMRA) was reported to have cured some Covid-19 patients (Nordling, 2020). The Madagascar experience was replicated in different forms across the globe, where people searched for herbs, roots and other plants traditionally used to treat symptoms associated with Covid-19 to cure the disease. However, despite conflicting reports of the efficacy of these therapies or treatments, the scientific and medical world refused to acknowledge or seriously investigate claims about the efficacy of these herbal or alternative therapies. In fact, these treatments were rejected and branded dangerous to people's health (Nordling, 2020; Adunimay & Ojo, 2022). However, a year later, research and medical reports in Nigeria show that people were being cured of the virus through the use of herbs and other chemical-based medicines used primarily for the cure of malaria (Attah et al., 2021; Ilori, Akintayo, Adewale & Oyetola, 2021). Perhaps, a deferring of judgment would

have produced a cure or at best a palliative through this herbal remedy if tolerated from the outset.

Repurposing

At the beginning of the search for a cure for the coronavirus disease, there were reports that some drugs known to cure particular ailments were found to cure those who contracted the disease. Chief among these drugs were chloroquine and hydroxychloroquine, two drugs that have been used for decades to effectively cure malaria, especially in Africa, where malaria is prevalent (Lasheras & Santabárbara, 2020; Das et al., 2020; Belayneh, 2020). It is widely known in medical practice that a drug might have multiple uses in treating ailments. This phenomenon is called repurposing. Drug repurposing is defined as "researching new indications for already approved drugs or advancing previously studied but unapproved drugs" (Krishnamurthy, Grimshaw, Axson, Choe & Miller, 2022, p.1). As the name suggests, it is simply to change the purpose for which a drug or medication was initially developed to include the treatment of other diseases. This practice is an integral part of drug development in the medical field. Graul et al. (2010) reported that about 30–40% of new drugs and biologics approved by the United States Food and Drug Administration (FDA) between 2007 and 2009 were repurposed or repositioned products.

Interestingly, Kesselheim, Tan and Avorn (2015) reported that 35% of drugs defined as transformative and innovative, approved by the FDA from 1984 to 2009 that had groundbreaking effects on patient recovery, were repurposed inventions. Further, Krishnamurthy et al (2022) reference experts who assert that repurposing drugs is faster, cheaper, less risky and brings higher success rates than conventional drug development methods, principally because investigators can bypass past stages of development that establish drug safety. Researchers thus avoid a repetition of the completed process of drug development. In this wise, Bright et al. (2021) reported that medications used for pre and post-exposure prophylaxis to fight infections like HIV have successfully curtailed the spread of infections in significant populations. Further, they contend that

numerous drugs repurposed after being licensed or investigated for use in treating other infections were being studied for the possibility of their being therapy and prophylaxis for Covid-19. Finally, they explained how these products work:

> These products act by five mechanisms: inhibition of virus replication, inhibition of entry of the virus into cells, killing the virus, augmenting a physiologic immune response, or treating symptoms. The drugs can be classified into antivirals, anti-parasitics, antibiotics, and immunomodulators (Bright et al, 2021: 5).

Though the Covid-19 infection was new, efforts to find a cure, whether immediate or permanent, could have accommodated isolated claims of cures. These claims would have been investigated with their merits included in a global repository that would have assisted the search for a permanent cure.

The medical practice of repurposing finds a context in the divergent thinking technique of the Creative Problem Solving (CPS) process. As mentioned earlier, the process encourages the search for creative solutions first, to generate multiple options that portend solutions before settling for the valuable solution. One of the tools of CPS is SCAMPER (Eberle, 1996), a Brainstorming tool developed by Alex Osborn. However, Eberle (1996) developed the mnemonics SCAMPER, which stands for: (S) Substitute, (C) Combine, (A) Adapt, (M) Modify, (P) Put to another use, (E) Eliminate and (R) Reverse. SCAMPER is an easy, quick, and direct method of brainstorming used for asking questions about existing products, using seven prompts (The Mind Tools Content Team, n.d). The prompts facilitate the growth of creative ideas that helps to develop new products and improve current ones. Products are not only physical entities but include services, processes and people. The individual, therefore, needs to adapt this technique to multiple situations. One of the seven prompts, "Put to other use", underscores how repurposing could have been used to treat Covid-19 until a true

cure was found for the virus, preventing the global destructive dimension of the pandemic.

Consequently, "Put to Another Use" helps the solution seeker ask: Can you use this product elsewhere, perhaps in another industry? Who else could use this product? How would this product behave differently in another setting? Could one recycle the waste from this product to make something new? (The Mind Tools Content Team, n.d). One can comfortably suggest that exploiting the gains of repurposing within the context of the onset of the Covid-19 pandemic would have resulted in some outcome that could have saved lives, as witnessed in Africa at least.

Diversity, Equity and Inclusion

One of the definitions of creativity is the production of what is novel by connecting previously unconnected ideas (de Vries, Delnooz, Velthuijsen & Pinxten, 2022). Such a connection produces valuable outcomes in a particular domain or the context in which that connection occurs. The Covid-19 pandemic has underscored that no part of humanity can operate in isolation. All classes of humanity must be connected. A creative attitude makes that practicable. The Covid-19 crisis started in December 2019 in an otherwise unknown part of the world in China and suddenly became a global phenomenon that altered the world's ways. Every nation and race, therefore, must not live in isolation. No nation or race must be neglected in the efforts to improve the global human living condition. One of the topical issues in contemporary parlance is the three in one concept of diversity, equity and inclusion (DEI). While these ideas have influenced growth and development in the western world, it would seem that these did not feature in resolving the pandemic at the outset.

Realising that there is only one humanity, the world has deliberately shifted focus to address all forms of discrimination. The Western world primarily spearheads this shift. However, the objectives of this new paradigm shift to end all forms of discrimination seem not to be global enough. If there is one humanity, it should be expected that all the people that populate the world

should have equal opportunities to contribute to the welfare and well-being of the human race. Garelnabi et al. (2022) have shown that inequality in whatever form impacts public health negatively. The effects range from access to available healthcare systems to even contributions to the health system. One continues to wonder why ideas for solutions to the Covid-19 pandemic from Africa were largely ignored. This snob, however, encouraged many African countries to take their destiny into their hands and devise homegrown solutions to the pandemic while collaborating with the developed world. It will also be appropriate to note that African nations did not do a bad job of safeguarding the lives of their citizens from the mortal consequences of the pandemic. It is not, therefore, too late for the medical world to readdress the anomaly caused by the snob of Africa in the search for solutions to the global pandemic. One question that has continued to defy the wisdom of the developed world is why Africa did not suffer the dimensions of calamity predicted by influential individuals and organisations at the advent of the pandemic. That Africa suffered a significantly low loss of lives to the Covid-19 pandemic is something that calls for a thorough investigation.

As the world increasingly becomes more diverse, inclusive and equitable, individuals, organisations and nations need to intentionally put structures in place to ensure that all spheres of human activity accommodate the prospect of the contributions of everyone who has something to offer. An example worthy of emulation is that of the US National Institutes of Health (NIH). The NIH funds the most significant biomedical and behavioural research globally. It seeks essential knowledge about the nature and behaviour of living organisms and applies the same knowledge to boost health, elongate life, and reduce or eliminate illness and disability (Garelnabi et al., 2022). The NIH has, thus, responded to the current reality of different forms of discrimination by stating that it recognises systemic discrimination in biomedical research and reinforced its obligations to stem the tides of structural bias in the biomedical workforce. Thus, NIH has launched a new initiative to "evaluate NIH extramural

policies and processes to identify and change cultures, practices, and structures to promote inclusivity and diversity within the extramural research ecosystem" (Garelnabi et al., 2022: 3). In addition, the global health community should begin a deliberate move to include Africa in the search for solutions to the global burden of disease beginning with the Covid-19 virus.

Conclusion

One of the virtues of the CPS model is the ability not to despair or be afraid when mistaken. Mistakes, therefore, are not an end in themselves for the genuinely creative, but a learning opportunity not to go the route that led to the mistakes when seeking solutions. As long as we try new things, mistakes are bound to occur. Since pandemics have been predicted to be an integral part of the challenge of contemporary humanity, it will be wise for the powerful and advantaged persons, organisations and nations to include all categories of humanity in mitigating these challenges. Excluding any section of humanity in solving global challenges is restrictive and so assumes an importance that nature abhors. To Einstein (1950), "This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty". If creativity is an essential life skill and all-embracing, humanity must embrace all of nature to always get the best out of it. Health is an integral part of humanity. The Covid-19 pandemic has proven that if one part of the world becomes sick, the rest will eventually be infected if care is not taken. Barriers must therefore be removed while solving the world's problems.

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