

# Building Human Security and an Entrepreneurial Middle Class with Natural Resource Partnerships: Propinquity, Behavioral Economics, and Blockchain Game Theory Strategy



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**Abstract** A 2500-year history of invasion, conquest, and resistance has left Afghanistan ethnically diverse and culturally rich. And yet, this storied history has bequeathed to the nation's people a legacy of political fragmentation, economic impoverishment, and in recent times, even some international isolation. The last 40 years of relentless conflict, encompassing two superpower invasions and decades of a smoldering civil war, have placed entire generations of Afghans at risk for post-traumatic stress disorder and have pushed the nation into a cycle of poverty, reduced educational opportunity, and violence. It is the contention of this paper that several academic concepts—the neuroscience principle of propinquity, the scholarly disciplines of behavioral economics and game theory, and the blockchain technology promoted by “Satoshi Nakamoto”—can be woven together into a practical application to create business partnerships, jobs, and an entrepreneurial middle class for Afghanistan, thereby decreasing poverty and the fallout of crime and violence significantly. Based on these principles, a genuinely non-exploitative partnership structure can be built between United States and Afghan interests. The central role of military can be replaced by private sector players, to achieve through human security what could not be achieved through kinetic force. In such a diverse culture, and amidst the difficulties of Afghanistan's geographical and topographical scenario, military dominance in Afghanistan has always failed, for thousands of years. Yet, that never would have been the true solution anyway. It seldom is. Afghanistan may utilize its vast mineral wealth as a starting place for trade, human security and national security, assisted but unexploited. And done in partnerships rather than as suppliers, they may then begin to extract the wealth of its human resources and find its future as a contributing and secure world citizen. The discussion below will sketch a broad outline of a possible path forward, employing twenty-first century innovative business structure to solve for the underlying long-standing impediments to security and prosperity. Like gravity, applications of these principles are true whenever humans compete for value or security. Anywhere self-interests have vetoed the common good,

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to the ultimate demise of both, these principles and guidelines that follow will prove useful for building the hope of a nation.

## Introduction

The United States has spent \$2 trillion in the war in Afghanistan. This comes to 32 times more than in the war's predecessor, the Gulf War. Add to that cost lost lives, lost capacity, US and Afghan internal political strife, regional foreign policy mayhem, and incalculable damage to an entire generation of children, and the cost of war can be seen as incalculable. There are consequences to the decades of war, poverty, uncertainty, surge and withdrawal, aid and no aid, missing limbs, widowed heads of household, and lost educational opportunity. What can we do to promote peace and human security that we have not already tried?

In the centuries of interaction between the West and East, more narrowly focused in this document on the United States and the Silk Road of Central Asia and the Middle East, the working model has been vendor and purchaser, supplier and buyer. While this seems reasonable, of course, there are scenarios where national security, human security, and economic development must be valued more heavily than simply getting a good price for raw material.

The true cost of exploitative transactions are seldom considered for natural resources. Whether short-term exploitation of trees in Malawi or the rain forests, or of minerals and gemstones in Afghanistan, or of cheap labor markets, the true long term costs of shortcuts are generally not pondered or weighed. The short-term gain and stockholder appeasement model of capitalistic enterprises is naturally first priority, even if unsustainable in a timeframe as short as ten years. The billions of dollars spent in aid and trillions in war are proof enough that the effort to control resources and advantageous labor markets, while neglecting the people themselves of resource-rich nations, will eventually create a hot spot of strife, if not induce moral decay and corruption.

In what follows, I will put forth the structural revolution of building innovative private sector partnerships to harvest human potential, and to capture the compounded value of the supply chain for Afghanistan and developing nations for security and international prosperity. This can be accomplished by combining already-recognized elements of Behavioral Economics, Game Theory, intentional propinquity, a twenty-first century project-based entrepreneurial education model, and mobile technology to create the multiplying power of an entrepreneurial middle class for small business job creation and human security. The undisputed engine of the most powerful economy in history, twentieth and twenty-first century United States, has been its entrepreneurship, and the "small business" job creation that naturally precipitates. Small businesses are also the businesses that become large businesses, and continue to create jobs. The development of human creativity, the ability to have and follow dreams in security fuels growth in knowledge and skills, health and culture, while reducing crime. Private sector seeding, via partnerships, can accomplish what the

military is not designed to accomplish. We will explore all of this together, and how the principles may be intentionally employed, so to speak.

Aid is helpful, but cannot accomplish what private sector non-exploitative partnerships can create amongst the ambitious youth and the next generation. This chapter will discuss this strategic approach to building a nation's future for its children and children's children in the pages that follow. Blockchain game theory for business partnerships, mobile technology previously unavailable, "scalable project-based entrepreneurial education," together with trillions in Afghanistan's own natural resources, will jumpstart their future of creativity and an entrepreneurial generation.

The Bonus: This model will simultaneously develop international human potential to tackle issues such as water and food security, emerging diseases, climate change, and other potentially existential issues in the days to come. Every community has genius that is tapped because of opportunity or remains untapped for a lifetime. Developing human potential while reducing the number of emotionally damaged youth holds a promise that kinetic military action coupled with even the best aid programs can never accomplish. Meaningful opportunities and inspirational "education" absolutely reduces crime and violence, and creates a future for the children of the world.

Far and away, the best prize that life has to offer is the chance to work hard, at work worth doing. (Roosevelt 1903).

## A Dilemma of Historic Magnitude

Referred to as "the Central Asia roundabout" due to its passageway of Silk Road trade from the Mediterranean, Middle East, India, and China, Afghanistan has acquired resultant settlers for millennia (Starr 2011). Yet there is even more to Afghanistan's ethnic and cultural diversity: the region has suffered a relentless series of invasions and accompanying seismic cultural shifts throughout all of recorded history. From Darius I (516 BCE) and Alexander the Great (330 BCE) to Genghis Khan (1219–1221), from the British (three times from 1838–1919) to the Soviets (three times from 1929–1979), each invader has left its deposit of culture and values. This interplay of cultural influences is dizzyingly complex. Darius I managed to extend Persian control into parts of modern Afghanistan before the arrival of Alexander. The Macedonian's bloody foray into Bactria resulted not only in a Hellenistic-Persian-Buddhist hybrid culture that persisted for centuries, but also in an enduring Western fixation with the strategic importance of the region, a view that has persisted to this day (Holt 2012). Persianizing influences continued with the emergence of the Sassanian Empire as a regional power (224–651 (Payne 2014)). A seismic shift was set in motion by Arab conquest of the region in the seventh and eighth centuries, although full Islamization required nearly 500 years (Kennedy 2007). During a respite coinciding with Europe's Middle Ages, Central Asia—including much of Afghanistan—experienced what has been termed its Golden Age (Starr 2013). In the ensuing centuries, waves of Turkic invasion and peaceful settlement left their own mark on Afghan ethnicity and

culture. In the thirteenth and fourteenth centuries, the invasions of Genghis and Timur swept through the region, causing massive depopulation (Saunders 2001). After the rise of European colonialism, Afghanistan found itself caught up as a buffer state between Russia and British India in the notorious Great Game contest for Central Asian influence, suffering invasion and attempted regime change in the nineteenth century—and arguably the twentieth as well—in consequence (Murray 2016). The twenty-first century has yet to see a truly new paradigm emerge.

This historical sketch, while all too brief, serves to underscore an inevitable conclusion: the legacy of this cycle of invasion and resistance has been incalculably costly. This region has fiercely retained its independence at the price of internal fragmentation, economic underdevelopment, political isolation, and frequent radicalization. In the apt words of military historian Tanner (2009), “In between enduring or resisting invasions from every point of the compass (and most recently from the air), the Afghans have honed their martial skills by fighting among themselves, in terrain that facilitates divisions of power and resists the concept of centralized control.”

The dream that a unified nation state could be created by pencil strokes on a map guided the decisions of Western political elites working hurriedly and secretly in the postwar world to respond to the collapse of British colonialism and the emergence of new geopolitical realities. In truth, their artificially created national boundaries for Afghanistan stitched together a patchwork of people groups. The Constitution of Afghanistan officially lists 14 distinct ethnic groups before adding “and others,” an admission that even this extended list is far from complete (The Constitution of the Islamic Republic of Afghanistan 2004). Indeed, modern Western academics have tallied no fewer than 55 Afghan ethnicities (Orywal 1986). Pashtuns (40%) and Tajiks (36%) comprise the largest ethnic groups, followed by Hazara (10%), Uzbek (8%), and Turkmeni (2%). Each of the other recognized groups accounts for 1% or less of Afghanistan’s population (Akseer et al. 2019). Besides the official languages of Dari and Pashto, eight other tongues, including English, are spoken by at least 1% of the population (Central Intelligence Agency 2020). Ethnicities remain regionally concentrated. “The effort of European surveyors has borne fruit mainly in the form of constant civil wars among the Afghan people. The Uzbeks, Tajiks, and Turkmen north of the Hindu Kush, as well as the Hazaras among the mountains, have constantly resisted rule by the Pashtuns of the south; and vice versa” (Tanner 2009). As Nigel J. R. Allen has commented, “Much of the problem in Afghanistan today stems from the Eurocentric view that Afghanistan is a sovereign state internally consistent with an undifferentiated population” (Allan 2001).

With each group come anthropologically diverse folkways and mores and dramatically different embedded convictions about forms of governance, law, and leadership. For a nation state to bring unity to a heterogenous mixture of peoples with such a high degree of diversity is a staggering challenge, one with few parallels on the planet. Western concepts of artificial national boundaries, forms of government, contract law and property rights, partnerships (transactional versus relational), and definitions of honesty and fairness, cannot be assumed. In Afghanistan, the corresponding concepts are as diverse as the people groups and as varied as the radical and isolating regional topography of the nation.

To illustrate an essential priority in Afghanistan, little understood by presumptuous or non-studious outsiders, by and large the country prefers *jirga* decisions—respected village or regional leaders sitting in an egalitarian circle so that none are viewed as superior—over the Western model of contract or criminal law, argued by a lawyer in front of a judge and jury (Taizi 2006; Reichel 1998). That changes quite a lot in one's approach to the country and business and unwelcome intervention, if one were to understand and respect this fact. In a 2019 nationwide survey of nearly 16,000 Afghans, local *jirgas* were rated much higher than state courts for being “fair and trusted” (81% vs. 66%), “following local norms and values” (74% vs. 57%), “effective at administering justice” (74% vs. 53%), and “resolving cases promptly” (73% vs. 47%) (Akseer et al. 2019). When asked how much trust they have in any certain groups to “do their jobs,” 67% of these Afghans expressed “some” or “a lot” of confidence in local *jirgas*, while only 53% expressed confidence in their local member of parliament, 47% in international NGOs, and 44% in government ministers (Akseer et al. 2019). This example from the justice system offers a warning and a lesson. To ignore the value system and governance convictions of a people would be to diminish them—and to welcome the consequences of having attempted to superimpose one's own will and values over theirs.<sup>1</sup> How different would this be from trying to impose one's religion or non-religion over an unwilling participant? Such a misstep would be unsustainable and futile. Instead, the way forward for a viable future for Afghanistan must resonate with local values, as diverse and nuanced as they may be. Relationships and decisions must be embraced from within rather than imposed from without.

Even guided by this understanding, there are formidable obstacles to helping Afghanistan resolve the internal pain points and press outward. It is a landlocked nation, with no rivers that can be navigated to an open sea. Roughly the size of Texas but with a topography more analogous to Switzerland's, Afghanistan has only 12% arable land, with 50% of its land mass at 6550 feet elevation (2000 m) or above, and 80% of its inhabitants living in rural areas with little infrastructure or communication (Library of Congress 2008). As a result, education for most has been informal at best. In 2014, 59% of a national sample of Afghans reported that they had never attended a school of any kind, while only 10% had received a high school diploma and a scant 1% had completed a university education (Warren et al 2014). The national poverty rate has soared in recent years, with 55% of all Afghans forced to subsist on less than one dollar per day in 2016–2017 (Akseer and Rieger 2018). In urban areas, 29% live in crushing poverty, while in rural areas the problem is even more severe (Ministry of Economy 2010). There are demonstrable correlations between poverty of this magnitude with its subsequent lack of hope and the occurrence of violent crime stemming from convenience and need for means of subsistence (Kelly 2000). In the United States, low-income youths with few opportunities for education or meaningful employment are much more likely to commit violent crimes than are their higher income peers (Kearney & Harris 2014). When asked in 2019, Afghans

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<sup>1</sup>See, for example, the carefully reasoned analysis of Wardak, A. (2004) Building a post-war justice system in Afghanistan. *Crime, Law and Social Change* 41, 319–341.

troubled about the direction of their nation most often named violence and crime (75%) and a weak economy (42%) as the cause of their pessimism (Akseet et al. 2019). When asked how often they fear for their personal safety, three-fourths of all Afghans responded “always,” “often,” or “sometimes,” while fewer than half did so as recently as 2012 (Akseer and Rieger 2018). One in six Afghans reported that they or someone in their family had experienced crime during the previous year, most often physical attack and beating (mentioned by 36% of those who reported crimes) but also including extortion, burglary, suicide attacks, and murder (Akseet et al. 2019). And the vicious cycle relating diminished educational opportunities and increased violence continues full circle; in 2018, more than a thousand schools remained closed due to security concerns, while 192 schools suffered violent attacks (Akseer et al. 2019). There is no reason to believe that hopelessness in Afghanistan has not affected the region and the world at the cost of tens of thousands of dismembered or lost lives and trillions of dollars, as well as a staggering opportunity cost for the Afghan people and the world community.

Firsthand experience brings the point home. During the author’s visit to Kabul in January 2020, virtually every building of significance was surrounded by one of thousands of high concrete walls protected by some of the miles of razor wire in view, and descriptions of real estate that are unimaginable to the western world (Fig. 1). Tens of thousands of blast walls line streets and divert traffic from main roads to side streets. To get some idea, a reader in the West could visualize the main streets of any familiar city and imagine that they were all blocked indefinitely with concrete barricades and armed security checkpoints. Traffic moving at 2 km/h through key parts of the city and diesel smoke hovering in the air are amongst the maddening consequences of the security concerns that continue unabated even after so many years.

**Fig. 1** Kabul homes for rent, January 2020.  
Photograph by author



## High Level Solution

Over the last twenty years, the United States, the UNDP, USAID, NGOs and many additional players have sacrificed deeply in attempts to establish their closest approximation of best practices for governance, economic development, and human security in Afghanistan. According to the Watson Institute for International Affairs at Brown University, the total cost to the US federal government alone of the so-called “War on Terror” in Afghanistan, Iraq, and Pakistan has been \$6.4 trillion, financed primarily by borrowing at interest (Watson Institute at Brown University 2020). Human costs on the Afghan side are harder to quantify but no less staggering. To gain some intuition, we can consider the emotional cost.

Posttraumatic Stress Disorder (PTSD) is the subject of voluminous research (Shalev et al. 2000). In response to a threatening or horrifying experience, victims who develop PTSD exhibit a range of symptoms, including recurrent, involuntary memories (“flashbacks”) and dreams; intense mental and physiological reactions to cues that trigger these memories: avoidance of external reminders, such as people, places, and topics of conversation; persistent negative beliefs about oneself, others, or the world; persistent fear, horror, anger, guilt, or shame; detachment from others; and low interest in participation in important activities (Bisson et al. 2015). PTSD is also associated with a whole range of negative effects on overall health, taking a toll on the immune, cardiovascular, and digestive systems and leading to unexplained dizziness, blurred vision, sleep disorders, and chronic pain (Gupta 2013). Although PTSD has been especially well studied in combat veterans, it has a significantly high prevalence in civilian populations and may become widespread in a community experiencing traumatic events. At the beginning of 2020, for example, one in three Hong Kong adults were exhibiting symptoms consistent with PTSD after experiencing nine months of sporadic protests and isolated riots (Ni et al. 2020). A similar proportion of teens in impoverished Los Angeles and Chicago neighborhoods have been found to exhibit mental and behavioral traits consistent with PTSD (Gudiño 2013). One in three direct victims of terrorist attacks likewise experience long-term PTSD symptoms (Paz Garcia-Vera et al. 2016). In this light, what have the 40 years of gunshots, brawls, hatred, civil war, invasions, landmines, poverty, and joblessness done to two generations of Afghan adults and youth?

At this point, a bit of risk for a new and creative approach may be welcome for preserving lives, livelihoods, human security, and national/regional/world security. What is there to lose? There is widespread realization that a change in the current paradigm is clearly needed (Cornell and Starr 2018). If we were to look for solutions to protect the future, taking into account the high cost of PTSD on their youth, while recognizing the diverse priorities and convictions of Afghanistan’s ethnicity and culture, we’re faced with a choice: We could give up (to their peril and our own, as history has shown), or we could begin here.

## Behavioral Economics and Anthropological Levers

If there are some common themes of passion and priority amongst all languages and cultures and ethnicities, even in a land so diverse as Afghanistan, what would they be? If there is a common language, non-spoken and beyond ethnic boundaries, how might that play a role in solving security and crime problems, knowing how crime and violence are directly correlated to economic hope and self-determination?

What drives and motivates the human species, and how might this information serve to develop a war-torn nation without kinetic force, and without eternal dependence on aid-related approaches? Here is a list of prime movers most influential to individuals and governments, in varying degrees:

- Greed
- Fear
- Pride
- Survival instinct
- Family: protection, provision, love
- Power hunger
- Drugs, creating irrational or unintended behavior
- Exceptional individuals (the notion that nothing terribly good or terribly bad happens without an extraordinary person who has escaped the limitations and mediocrity of his time, for better or worse, the “great man theory” of history)

Any and all of these listed factors can alter or define the path of a man or woman or child, or of a nation. Religion and nationalism, per se, are not listed, since humans are prone to use these to manipulate others and to contort ideas to serve their own ends, using deity or national pride and raw emotion to justify their actions. The list above encompasses most religious zeal or nationalistic fervor in such cases. We will leave the rest outside of the scope of this conversation.

Let's return to the search for a Rosetta Stone solution to anguish and chaos, when the tools of hope, quality of life, and intellectual stimulation are generally unavailable to most. Such a search must begin with this list above, topics that remain relevant—regardless of language and culture. How can this list then be woven into a cross-cultural, multi-lingual, education-and-wealth-agnostic approach to building relationships, business, an economy, and human security? It should be apparent that the solutions to these problems, or circumvention thereof, must be the goals. Regardless of language or customs, preferences for a type of governmental construct or lifestyle, religion or geographical constraints, humans are much the same in what they fear and what they desire. Is there a way to get to the heart of this, using internal means, rather than simply laws or military, or external constraints fraught with the perils of loopholes or rebellion? How might we develop human potential in a region or nation or neighborhood filled with bad memories and a primary need for self-preservation? Is “aid” the solution? Do natural resources alone provide a reason for hope? I submit the answer has always been a firm “no,” generation after generation.



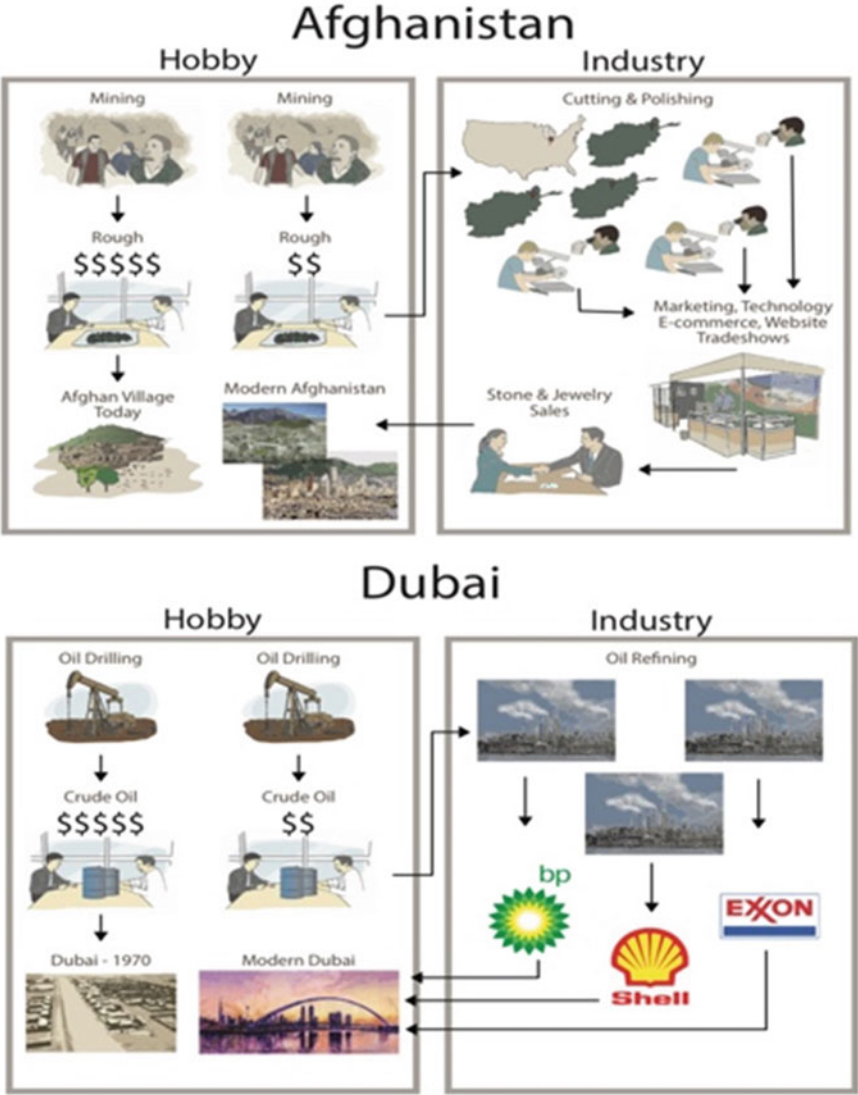
As a case study, while much of the world's natural resources are found in what are still the poorest and most violent countries on earth, South Korea became an economic powerhouse from zero, via human development and a focus on human capital (Kim 1991). In the spirit of Adam Smith, we can also agree that Great Britain developed human resources and technology—and soon owned the gold and wealth collected by Spain in that same era. Money does not solve generational problems, directly. Afghanistan currently ranks 170 in the Human Development Index (HDI) and relies on foreign aid for as much as 90% of the national budget (UNDP 2019). The literacy rate is only 31% of the adult population—17% among females nationwide, with only 1.6% in two southern provinces (UNESCO 2020). As one of the world's youngest nations, with nearly two-thirds of the population under 25 years of age, the upside potential is staggering (UNFPA 2020). So is the downside potential: if the opportunity today in Afghanistan is lost, the consequences for future world security cannot be ignored.

Afghanistan, with massive yet largely untapped mineral wealth, can be likened to a family sleeping on the driveway of their \$100 million mansion, because they don't have the keys to their own home (Risen 2010). Successful transformation of mineral mining from a hobby economy to modern industry (Fig. 2) is a path that leads to both human development and resource development, in contrast to merely selling the material to others, who become wealthy at the developing country's expense. It is the thesis of this article that the same path of partnerships, human development, and internal resource development (starting with the less capital expenditure-intensive and more scalable minerals) will also lead to human security, breaking the cycle of poverty, crime, and violent ideology—and all of this with much lower risk to human lives or national economies.

## Partnerships

With the above list of prime movers in human culture always in mind, let us now explore how to define a cross-ethnic strategy, based on Behavioral Economics, Blockchain Game Theory, intentional propinquity, a twenty-first century project-based entrepreneurial education model, and mobile technology. To what end? To foster the creation of an entrepreneurial middle class, unleashing its massive power for small business job creation, in the process decreasing crime and violent conflict.

I suggest the seeding of a generationally secure solution for Afghanistan is not primarily a military endeavor at this point, nor merely an “investment” of CapEx industry or infrastructure by outside agencies or nations alone, but rather lies in creating human development and micro-disposable income to create an entrepreneurial creative middle class. The seed of the future is to bring the compounded value of the supply chain for Afghan minerals “home” to them via business *partnerships* between Afghans and Americans (in particular). Contrast a partnership concept with a conventional supplier/purchaser model for raw materials. Historically, the latter ultimately nearly guarantees failure for the nation supplying the



**Fig. 2** Transformation of mineral resources from “hobby” economy to modern industrial economy

raw material. Exploitative removal and sale of lithium, copper, rare-earth minerals, precious and semi-precious gemstones and other raw materials from the Hindu Kush and other regions does not provide a future for Afghanistan, as similar extraction models have not for other mineral rich nations.

The alternative concept reflects the reality that a simple and low purchase price for raw materials is universal in the world of manufactured and marketed goods.

As an example, in 1996 it was estimated that the raw material of rubber used to manufacture an automobile tire costs \$8.87 (equivalent to \$14.62 in 2020 dollars); a typical manufactured tire retails today for \$200 (Ferrer 1997). Another classic example is “bottled water” that costs between 300 and 2000 times as much as tap water (Colas 2013). And yet, selling bottled water at market prices does not yield massive profits. Why? Because the cost of pallets, truckers’ wages, fuel, plastic bottles, insurance, warehousing, marketing and the rest has increased the actual manufactured cost of a third of a penny of water into seventy-five or eighty cents of actual cost to the manufacturer. That’s how it is in the world of supply chain management and wholesale/retail. The rubber farmer makes very little; everyone along the chain makes at least as much. The actual profit at the point of sale may be small, but far exceeds the rubber farmer’s portion of the product’s sales price, after he or she has supplied the very material to create the product.

What if the raw material owner had the skills and access to control half or more of the supply chain, processing, and marketing? What if the raw material supplier and the rest of the supply chain were partners, rather than vendor/buyer? What if all parties could avoid the implied struggle over price cuts, profit distribution, and gamesmanship? Instead of the golden rule of the twenty-first century, “He who has the gold, rules,” we might harken back to the original quotation and see what the results may be.

Let us consider a very different model of creating wealth, capacity, and security using a business partnership structure that leverages behavioral economics, blockchain game theory, the neuroscience concept of propinquity, and technology for a synergistic future. True private sector partnerships in Afghanistan with United States partners would share the value-add multiplier that typically lands largely in the pocket of the refiners, marketers, developers, manufacturers, branders, retailers, and other governments. In this model, in return for providing the natural resource at no cost to their US partner (thus solving innumerable issues), Afghans would receive training and human resource development across the full spectrum of the required steps to market. Afghans would share in the full revenue model as partners—rather than remaining in the dead-end role of being a supplier only. This model creates an entirely different and powerful dynamic, reminiscent of the “Satoshi Nakamoto” masterpiece, the 2008 Blockchain Game Theory strategy whitepaper, which we will address soon (Nakamoto 2008). There is a way to build security into a business relationship that simultaneously changes the life trajectory of everyone involved.

## Defining Propinquity

The Merriam-Webster Dictionary (2020) says that “Propinquity and its cousin ‘proximity’ are related through the Latin root *prope*, which means ‘near.’ That root gave rise to ‘proximus’ (the parent of ‘proximity’) and ‘propinquus’ (an ancestor of ‘propinquity’).”

The field of social psychology has identified *propinquity* as a principal cause for interpersonal attraction (Small and Adler 2019). It is nearness, rather than absence, that tends to make the heart grow fonder—a nearness in physical proximity that in turn fosters the increased frequency of positive experiences (Alphonso 2016). And in any cosmopolitan or multi-ethnic society, this transfer of spatial closeness to relational closeness is the key to building a civil society. The concept of “neighbor” must translate into “neighborliness,” the point of the story of the Good Samaritan (Chan 2019). Without the trust that comes from relationships that are personal, the list of motivators in the human condition listed above, such as greed, fear, pride, power and the like will succeed in making business and cultures mistrusting and always searching for ways to win, rather than partner for the greater good. Humans are not “wired” to trust, and the self-fulfilling prophecies of bad experiences only reinforce the self-preservation motives that impede progress and human security. And yet, “propinquity” breaks down seemingly unbreakable barriers. Whether “accidental” or intentional, prejudices and fears are often removed by propinquity, close proximity, particularly in the context of shared goals or experiences.

This “propinquity effect” has been well documented for nearly a century. A classic study traced the development of friendships in a small, two-floor New York City apartment building in the 1940s. Unsurprisingly, near neighbors tended to be the closest friends, while those living on separate floors were unlikely to form close relationships (Festinger et al. 1950). Another frequently cited study followed the relationships formed in the Maryland State Police Training Academy in the 1970s. Researchers discovered that most friendships formed between trainees whose last names were close together in an alphabetized list. Why? Because this list was used to assign the officers to dormitory rooms and classroom seating (Segal 1974). Frequent contact allows the discovery of commonalities and the experience of mutually enjoyed interaction, leading to greater relationship intimacy.

That is the point. Propinquity is a neuroscience building block. Studies have shown that proximity helps overcome racism, ethnic bias, clothing style differences, language barriers, income inequality, education diversity, and nearly any other barrier to relationship (Korol et al. 2018). A near-desk coworker, a next-door apartment neighbor, mailbox neighbor, a roommate or bunkmate, or even an alphabetically sequential classmate is up to six times more likely to be a friend than someone further away or seen less frequently, regardless of race or religion or unfamiliar dress, or age or education or marital status. In fact, to make the point on the negative side, but just as revealing of the premise, the frequency of marriages or trysts between coworkers who share space and meetings and deadlines is a staggering 62%, statistically. Even in a world where business interactions are increasingly becoming more “virtual,” they can still be infused with a sense of “social presence” if built with care—a significant factor in harnessing the benefits of propinquity in an environment marked by geographic isolation (Oh et al. 2018).

Propinquity is an international language and neuroscience magnet. Propinquity applied to people intentionally empowers the development of relationships between diverse people groups, religions, ethnicities, languages, age, and more. Break-throughs can create a ripple effect throughout society: if my friend makes a friend

outside our “group,” this person will likely become my friend as well, a dynamic frequently observed in children but possible for adults (Jugert and Feddes 2017). Previous enemies for many years, suspicious and hostile due to rumor or history or physical or cultural differences, often become friends when propinquity is introduced, even against advice and contrary to their own prejudices and intentions. It’s like gravity—it’s very hard to fight.

The power of propinquity has historically been unrecognized as a tool, and only studied as an accidental effect. Propinquity relationship, security, and business value have been especially difficult for Afghanistan to harness, in no small part because of geographic and cultural barriers. What if now, propinquity could be fostered through business structure innovation, and priming the economic and security pump by developing Afghanistan’s mineral wealth? Mutually beneficial, positive shared security and prosperity among people of different ethnic and tribal loyalties, while simultaneously better integrating the nation into the global economy is surely a legitimate objective for any nation on the world stage. Might we utilize intentional propinquity in our structure of partnerships amongst rival tribes or international partners previously untrusted, to build both relationships and wealth, security and quality of life, all of which diminish crime and violence?

Intentional propinquity has been built into security structure for centuries, such as European royalty and native Americans who intentionally shared grandchildren across previously hostile borders and tribes to build loyalties and shared time and mutual interests. The propinquity neuroscience effect has proven to overcome ethnic and racial boundaries, economic, educational, language or social barriers, and of being suspicious of the unfamiliar. The latter is often referred to today as xenophobia or islamophobia, as well as terms yet uncoined involving distrust of American “cow-boys” by UK business, or white carpetbaggers distrusted due to legitimately bad experiences in many eastern countries. Intentional propinquity is to execute strategically the principles of the many studied cases of happenstance propinquity in a neighborhood or workplace.

How might this be done? Employed intentionally in business partnership structures, bring together (with a stake in the outcome of a business enterprise) the children of leaders and youth from previously warring or competitive or untrusted families or tribes, or foreign companies or countries, into mutually dependent business relationships. The neuroscience effect of propinquity is to build trust where there was only suspicion or even hostility. This, combined with behavioral economics, twenty-first century project-based entrepreneurial scalable education, and Tragedy of the Commons game theory to make every transaction or partnership “everyone must win or everyone will lose,” can allow business relationships structure to be utilized for human security, job creation, and improved standards of living, rather than merely the historic model of “extreme wealth to the most shrewd and most powerful,” and the resulting hot embers of income inequality.

Since lack of challenging education and meaningful work are at the root of 60–70% of criminal activity in the US, as revealed by a quick search of “education employment and crime,” it stands to reason that international partnerships done well, for human development rather than exploitation, will help break a cycle of poverty,

crime, and violence. This will significantly reduce the need for law enforcement and military intervention, with their financial and social costs, as well as assist in replacing illicit and dangerous agricultural crops often used for survival of local villagers.

## Blockchain Theory

The brilliance of Satoshi Nakamoto (likely a pseudonym) in his 2008 whitepaper outlining a new method of a decentralized and secure cryptocurrency (which morphed into blockchain in 2013) lies not in the cryptographic methods (Nakamoto 2008). That is a technology with a long and continuous history of development. The power of Satoshi's big idea is actually, in my opinion, the *game theory* at the root of blockchain (a word that is not used in his whitepaper, actually). What challenge was he facing, as he hoped to create a currency that could not be controlled by a central bank, could reflect true market value internationally, and could not be stolen by bank robbers or embezzlers?

Satoshi baked "Tragedy of the Commons" game theory into blockchain, for the purpose of de-incentivizing what would have been inevitable continuous "hacks" to steal the billions in US dollars deposited in a decentralized international ungoverned "blockchain" as cryptocurrency. Tragedy of the Commons, like "chicken" and "prisoner's dilemma" and "Nash bargaining" and "Pirate," are studies in human propensities and statistical probabilities in decision making. Tragedy of the Commons, in particular, involves the war between personal self-interest versus the common good. If an action (say, the exploitation of a resource) creates both a benefit and a cost, and the benefit is experienced by the individual while the cost is shared among the entire community, an ethical dilemma is born (Hardin 1968). Originally applied to human impact on the environment, Tragedy of the Commons theory has been shown to apply to any number of human interactions (Hardin 1998). Antibiotic overuse, for example, may benefit an individual yet promote the spread of antibiotic resistant superbugs to the entire community (Porco et al 2012). Or, consider debris in near-earth orbit: deployment of a satellite, with no ability to safely deorbit it after failure, may benefit the nation or organization that owns the craft, while simultaneously adding to the risk experienced by others who wish to use near-earth orbital space, or not to experience the dangers of loss of orbit by something from which they never benefitted (Salter 2015). The applications of Tragedy of the Commons theory to economics are legion.

That is the Tragedy of the Commons game theory strategy, in short. Who benefits? Who gains? What are the motivations for making a deal, or violating a deal, or stealing from that deal? How might the deal be constructed so that the common good, the good of others, coincides rather than competes with individual personal benefit? Satoshi built "the blockchain" (although this word was not present in his initial whitepaper, and supply chain use of this idea and "blockchain" was not introduced until 2013) in such a way that a person seeking to steal or destroy would lose more (mining, "proof of work," computing and electrical costs, peer reputational destruction, and

immediate devaluation of stolen assets) by the theft than would be gained by that same player spending his energy protecting the blockchain from others.

One can make the case that the deep mathematical encryption within the blockchain structure is always conquerable to the clever, gifted, and determined. And that encryption, no matter how powerful, is far less powerful in mitigating corruption than his introduction of Tragedy of the Commons Game Theory where the dishonest have their own motives used against them to preserve the value of the deal. Satoshi turned the insidious hackers of the world into defenders and protectors of the blockchain, they themselves closing doors as quickly as anyone else could open them. The enemies became allies, because self-interest and the common good have become identical.

The technical details of the technology are not our discussion point here, perhaps to the readers' relief. The underlying principles are remarkably simple. In a business structure "use case" of blockchain theory the risk of a tarnished reputation is so visible that a violator may be forever ending future business relationships. In addition, there is the financial cost of dishonesty or broken trust exceeding the value of disingenuous, greedy, or corrupt behavior. The loss of financial and business value to themselves due to the nature of the "blockchain partnership structure" of shared responsibility is a powerful disincentive to engage in behavior that benefits "self" at others' expense. In short, selfish interests resolved in the common good and "reputation helps solve the 'tragedy of the commons,'" even when dealings are with individuals outside one's own social group, such as from another country but built into their "blockchain" business partnership (Millinski et al. 2002). Blockchain forges a link between ethical social behavior and individual reputation by creating a transparent, verifiable, traceable, and permanent record of the deal and business transactions, distributed openly to the entire community (Iansiti and Lakhani 2017). Unethical behavior is immediately daylighted, and the consequences are likewise immediate.

As we build partnerships and foster propinquity in Afghanistan, we are proposing to utilize the power of blockchain philosophy social and economic "technology" as a structural component for conducting business in an environment where security and trust concerns play a major role—as, in fact, they always do. If partnerships are structured to incorporate "we all win or we all lose," trust is built based on self-interest and the structure itself.

Our team has developed and patented supply chain blockchain software and hardware for Afghanistan's mineral industry to demonstrate and prove anti-crime ethical sourcing, and fair trade, from the mine to customer (ethicallysourced.com, trust-edblockchain.com) using human-free oracles for geotagging, time stamps, barometric pressure and AI to chart topography to market, RFID control points, fair trade biometrics, material science scans, photos of the miners, and all data unalterably on the blockchain and IPFS. This blockchain application is likewise available for Afghanistan voting, licenses, property rights, records, medical use, and other areas of need. But, more importantly in some ways, we have also quite successfully implemented this "tragedy of the commons blockchain business structure" in Afghanistan, to the benefit of all. Win-win.



## Behavioral Economics

A recent Nobel Prize in this field and the publication of many books and papers on the topic<sup>2</sup> have made unnecessary a deep discussion here. Instead, we will consider a quick listing of the Behavioral Economics (BE) principles that should be considered as business structure is framed to overcome language, culture, bias, distance, and security issues.

**Defaulting.** Keep it simple. The simplest path is usually the path most chosen, especially in complex scenarios with a proliferation of options (Huh et al. 2014).

**Social Proof.** Among participants in a study, 44% more people will make a choice because others are known to be doing it, rather than basing their choice on the factual options themselves (Cialdini 2001). In the marketplace, customer ratings and reviews have emerged as a powerful motivator—or demotivator—for sales (Ambler & Bui 2011). Word of mouth and visible participation builds community trust.

**Loss Aversion.** Humans are twice as likely to make the exact same decision if the question is framed in terms of protection against losing something they have or might have had, versus promoting what they might gain from a decision (Kahneman & Tversky 1979). Loss aversion is a deeply human trait, apparently hardwired in certain dopamine-regulated regions of the human brain (Tom et al. 2007).

**Greed, Fear, Pride, Survival, Family, Power, Drugs, Great Man Theory...** I submit that, just as the list above reflects some of the reasons that “rational” economics don’t always “work”—this list has more power over decisions than normal logical behavior might have predicted. Flight-or-fight adrenaline and norepinephrine hormones, while they are helpful for exercising power, are not useful for promoting business collaboration, whereas dopamine, serotonin, and oxytocin are relationship and deal builders (House and Singh 1987; Shamay-Tsoory and Abu-Akel 2016). Everyone who has lived with a marriage partner, raised children, or negotiated a difficult business deal already has experience in initiating hormone dumps of either category. An awareness that these same principles affect human interactions at all levels will be required to forge a way forward in Afghanistan.

In short, building mutually beneficial, propinquity-promoting business relationships in Afghanistan will not come by defining rational behavior in a policy meeting and enforcing it by a show of power. Experience teaches us otherwise. Instead, it will rely, among other things, on the principles of Behavioral Economics, such as Nobel Laureate Richard Thaler’s “Nudge”: decision makers “choosing actions that are intended to make the affected parties better off *as defined by themselves*,” and

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<sup>2</sup>See, for example: Camerer, C. F., Loewenstein, G., & Rabin, M. (Eds.). (2004). *Advances in Behavioral Economics*. Princeton, NJ: Princeton University Press; Camerer, Colin F. and Loewenstein, George (2003) Behavioral Economics: Past, Present, Future. In: *Advances in Behavioral Economics. Roundtable Series in Behavioral Economics*. Princeton, NJ: Princeton University Press., pp. 1–61; Wilkinson, N., & Klaes, M. (2017). *An Introduction to Behavioral Economics*. Macmillan International Higher Education; Camerer, C. (1999). Behavioral economics: Reunifying psychology and economics. *Proceedings of the National Academy of Sciences*, 96(19), 10,575–10,577.



creating a “choice architecture” that will make entering into collaboration “easier, but no one is forced to do anything” (Thaler).

## Business and Partnership Structure to Rebuild a Nation

Imagine a group of people trapped in an auditorium by a criminal gang, bent on extorting a ransom—or they will murder all of the hostages. We can’t know what would cause the gang leader to gas to death all of the hostages. We do know, however, what would guarantee that he would *not* gas the auditorium: if he were told his grandchildren were now inside the auditorium. The siege will turn 180 degrees and be lifted in a heartbeat. Regardless of culture or religion or form of governance preference, regardless of greed, fear, pride, power, or other motivators, the “deal” can be constructed to turn self-interest into the protection of the common good. Partnerships created this way, the way of propinquity/game theory/behavioral economics, project based scalable education, and the macroeconomic concept of creating a multiplying economy via a seeded entrepreneurial middle class, rather than “investments” and “aid” and “supplier–buyer” supply chain management. As one renowned expert on this part of the world said recently, “This can work. It has the right stuff” (Shivers 2020).

We have established that trust is difficult enough to come by, and guarantees are nonexistent on this planet. We have further established that PTSD of a nation weighed down by 50 years of unspeakable stress does not help foster trust or stability. We have mentioned the lack of technology, the isolating topography, the multitude of ethnic groups and cultures in Afghanistan effecting philosophies of governance and relationships and religious nuance, and the Silk Road and invasion influences.

But what is common among the diverse groups? They all, we all, have children, and we all are someone’s child. And regardless of race or religion or age or education or financial status, everyone desires their children have hope and provision and a future. There are motives that exceed greed and fear, when opportunities are presented and executed fairly, and the alternatives are understood to be “more of the same” that no one desires.

So, using the “technologies” mentioned above, how do we create an entrepreneurial middle class? In the US, 60% of jobs are “small business” jobs, originally created by an “average” person with a great idea, and a little bit of money to hire two of his friends in a garage (Erlanger and Govea 2019). If the reader requires convincing, he or she need only consult the histories of now immense companies such as Amazon, Apple, Disney, Google, Harley Davidson, Hewlett Packard, and Mattel, to name but a few examples. Even the photos of their original garages are available to one searching for them. The “design” of the powerful US economy is the freedom of a little time, connected relationships, and a little bit of extra money to create and explore new ideas. How do we open this door for developing nations? As mentioned, “investments” alone are not the secret sauce, nor are aid programs or intervention by NGO’s or governments. That is merely feeding and teaching a

nation to fish, and walking away leaving them without bait or fishing poles or nets, or a place to market their goods. These well-meaning measures have never worked to build human security or to develop human resources and a sustainable, secure economy or life for a nation, long term. In truth, no one denies the fact that “aid” can create the exact opposite effect of the self-determined future everyone would prefer. We need different measures, different structures built on the above principles where exploitation is nearly impossible and partnerships are win–win for all of the private sector partners and governments, in international and local relations.

## **A Current Example of These Principles Implemented in One Industry**

The classic business structures of contract law, hierarchy, debt and equity, supplier and buyer are deeply inadequate in an environment as diverse and difficult as Afghanistan. Let’s reimagine the paradigm. The following simple but powerful model is already proving successful in its early days in Afghanistan, with colored precious gemstones as a test case. What if we were to structure our business deals that might surround the \$3 Trillion or so in natural resources in Afghanistan in a way that:

- Afghans and US are equals in the business, 50–50. Equals. No vendor/buyer environment—where a struggle for better prices may result in dishonesty, or lack of safety for workers, or other forms of loss for one party or another. This is inevitable in old-school competitive structures.
- Afghans add the raw materials to the supply chain, incentivized to keep costs low and safety high because they share in the final profit margin of the entire compounded value of the supply chain, rather than single transactions. 1.2 times 1.2 times 1.2 times 1.2 equals a doubling of cost with four steps of profit taking in the supply chain after the raw material stage. If villagers are partners rather than suppliers, they can easily double their income with exactly the same amount of work.
- All of the other elements of Intellectual Property, and the manufacturing and marketing and distribution, are provided by the US partner with all of the upline profits being split with the Afghans.
- In return for raw material access, the children of the leaders from all areas of the country, as well as villagers with previously little hope for upward mobility, are trained in every aspect of the chain, from lapidary skills, to inventory control and software, to app development and ecommerce, to blockchain coding, to graphic design, and laboratory skills.

As with Blockchain game theory, it is in no one’s best interest to damage the business or steal from it or misrepresent it to others. To the contrary, everyone who may have been inclined to use their power to damage the business or steal its assets now has every interest in protecting that business, for their children and for their

nation. If one wins, everyone wins. If anyone loses, everyone loses. If bias or prejudice or culture get in the way, everyone loses. Propinquity, game theory, and behavioral economics are harnessed to create a scalable entrepreneurial middle class with its generational multiplier effect. The opportunities for creative application of these principles are endless.

As an academic, a scientist, and an entrepreneur it is my observation that we, in the west, have been trapped for many years into our perspectives and structures borrowed from Athens, Rome and the British Empire. In so doing, we have been at a loss of how to overcome barriers, build trust, and do business by using universal communicators rather than contract law and western (often alienating) assumptions.

While the various means of applying the above principles are endless, it is my contention that these are the principles required to overcome the tragedies of poverty, war, crime, and alienation, as well as for building strong families and communities and domestic businesses.

Days are early, but the author can report the following observations:

- During a January 2020 visit to Kabul, from the highest level of Afghan officials, “Contact me anytime day or night,” and “Expect my full support, and always at no charge,” with “no corruption.”
- During the autumn of 2019, previous tribal leaders, some referred to by others as “warlords” (though perhaps more aptly sometimes “those who were trying to protect their families in a nation at war”) and businessmen who had been at odds for two or three generations, now warmly shake hands and share meals together and with us.
- During the spring of 2019, Afghan young people whose lives were at risk from bad influences, drugs, and crime, express excitement that they are learning a lucrative life-skill.
- In 2018, in the executive lunch hall on Capitol Hill, a 30-year US Congressman who had “opposed Afghanistan involvement” his entire career, changed his mind during lunch after discussing these principles.

The above evidence is anecdotal, of course, and many challenges must be overcome. However, I put forth the proposition that it is possible to create an entrepreneurial middle class that multiplies jobs, rather than merely adding jobs. Henry Ford created unknowingly a happy accident at the turn of the last century Ford paid assembly line workers double daily pay to slow turnover rates, resulting in many workers with a little extra money starting a new business with a friend. Since then, well over half of all jobs in the United States, the powerhouse economy of the world for 100 years, are “small business” jobs, created by an entrepreneurial middle class. The driver of the US economy is still a middle class with a tiny amount of extra cash, and a good idea. Investment in large capital expenditure projects and aid programs is incapable of accomplishing the multiplier effect of an entrepreneurial middle class. In fact, at some point such expensive projects may damage self-determination and human growth and security, more than they assist, as anti-trust advocates have argued at times. In contrast, there is reason for optimism that the principles outlined in this

paper can prove successful in creating a long-term platform for peace and economic growth in Afghanistan and potentially in other developing nations.

## Consequences for Great Power Competition

The time has come to reimagine the role of Afghanistan in the world. No longer should it be considered a “buffer state,” a shock absorber to keep superpower combatants from direct conflict. It is possible for US businesses and public–private partnerships to build a truly collaborative relationship with Afghanistan interests. Both parties would gain from the partnership, and the increase in regional stability and security would truly benefit the entire planet. The consequences of missing an opportunity to build deep relationships in “the roundabout of Central Asia” is reflected in this statistic from the International Monetary Fund regarding the Great Power competition: In the year 2000, 80% of all nations traded with the United States as their top trading partner. By 2018, that number was less than 30%. China now holds the top trading position with 128 out of 190 nations (Leng and Rajah 2020). While most trading partners and allies still regard the US as the world’s leading economic power, China is moving rapidly toward that position in the eyes of many (Wike et al. 2017). China is utilizing both scale (the engine of profit and growth) and international dependent relationships to become the great power of the future. As they control relationships internationally, resources for electronics such as rare earth minerals, as well as transportation and energy hubs and pathways, the case for the United States playing a stronger strategic role via partnerships is strong. Instead of the inevitability of losing tender bidding wars to the cash-heavy Chinese (government controlled and subsidized) operators, or Russia or Iran, we can simultaneously solve national security, regional security, human security, and business opportunities, reduce military costs, and build lasting relationships based on trust and friendships of mutual benefit, across cultural and religious barriers.

How? A Marshall Plan of Sorts.

Help create an entrepreneurial middle class anywhere a footprint is useful or help is needed for security, via scalable entrepreneurial project-based education (this does not require dedicated structures and the exceptional teachers required by a reused-but-now-deficient nineteenth century “lecture” and repeat “simon-says” model of education). Add to this business partnerships in any industry that incorporate the structure previously discussed of game theory, propinquity, and behavioral economics. Sharing of the supply chain can replace the vendor/buyer relationships that persist in extracting wealth from those who need it most. As has been proven repeatedly, the resultant loss of societal equilibrium, loss of security and prosperity, and the crescendo of anger and hopelessness—is a gap soon filled by nefarious characters or by internal turmoil for neighborhoods, nations, and the world. With some creativity, a little courage, and an innovative strategy we can take back what has been taken from us in the last 18 years we’ve been busy, engaged in other matters.

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