Five Terrorist Dystopias

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Contents

Keywords

Political violence; terrorism; biological divide; technoreligions; climate change; sanctuaries of crime

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Abstract

This article seeks to answer the question "What will be the main cause of terrorist conflict in the year 2040?". It argues that terrorism would be primarily motivated in the long term by technophobia, which - to take David Rapoport's analysis a stage further - would prompt a fifth wave of modern terrorism. The article offers a scenario analysis, describing five possible scenarios triggered by the interaction between five trends: technological advances in biomedicine, the emergence of new ideologies, climate change, structural unemployment associated with automation, and the growth of cities. The major strength of technophobia as a potential mobiliser of a new wave of terrorism is its cross-cutting nature, which enables it to serve as a cause accepted by any sector of the societies of tomorrow.

Introduction

Terrorism studies are one of the most complicated fields for prediction in the academic world. Terrorist organisations tend not to exhibit stable trajectories throughout their lifespan (Shapiro, 2013). Such groups operate in hostile environments in which counter-terrorism agencies go to great lengths to close the windows of opportunity that allow terrorists to survive and be effective operationally. Terrorists must innovate in order to retain the element of tactical surprise that enables them to confront more powerful adversaries. This constant reinvention renders a large part of available knowledge on the goals, procedures and underlying logic of such organisations obsolete.

Consequently, the analysis of terrorism generally takes the form of historical perspectives or detailed dissections of the present. Although the stakeholders concerned are aware of the need for a prospective vision to prevent and tackle terrorism, in reality the elusive nature of the subject, the lack or poor quality of data mean that any such vision is necessarily confined to a very limited timeframe.

With some exceptions (Kenny, 2013) (Jensen, 2015), terrorism studies are essentially retrospective, descriptive or short-term prospective. The vast majority of those that do look to the future tend to be intelligence analysis designed to support the actions of counter-terrorism agencies. The immediacy and certainty of the threats that prompt reflections of this kind usually mean that the conclusions are geared to practical knowledge which is directly applicable to the present. However, although necessary, such approaches need to be complemented by other types of analysis that consider the dynamic nature of terrorism, given that the changes terrorism undergoes cannot always be explained by previous data or experience.

Academic literature on terrorism of the future is limited, both in terms of quantity and time frame. It includes an abundance of case studies centred on the future evolution of currently active organisations (Ranstorp, 2006). Other works have focused on the impact of globalisation on future terrorism (Lia, 2007), the proliferation of weapons of mass destruction in the hands of terrorist groups (Taylor & Horgan, 2000) (Koblentz, 2011), the impact of cyberspace on the activities of such groups (Weimann, 2005), or how counterterrorism policies can generate effects that help perpetuate the problem (Hegghammer, 2016).

One understudied aspect is how developments in technology can nurture the grievances likely to underpin new terrorist offensives. An even more conspicuous gap relates to technologies that have still to be developed fully. This work aims to help remedy the aforementioned gap in knowledge by offering a prospective analysis of the hypothetical causes that will drive terrorist tactics in a longer-term time frame.

The basis for the study is the analysis framework suggested by David Rapoport (2001), for whom terrorism is an evolving process that can be broken down into different "waves" or time periods equating roughly to a generation (approximately forty years) and spurred by an ideology that drives the bulk of terrorist activity. Under this theory, ideologies, political interests and even values change from generation to generation, which explains why each generation exhibits a predominant characteristic of terrorism, even if some degree of overlap exists between one wave on the decline and the next one which is gathering pace. According to Rapoport, modern history has witnessed four waves of terrorism: a) a nihilist anarchist wave (end of 19th century until World War I), b) an anti-colonial wave (up to the end of the 1960s), c) a Far Left wave (until the mid-1990s), and d) religious, mainly Islamist, terrorism (mid-90s to the present day).

The research question addressed in this paper focuses on the period commencing after the end of the current wave of jihadist terrorism (calculated to be around 2040) and has two aims: a) to consider a time frame (+20 years) rarely found in prospective studies on terrorism; and b) to offer reflections on a future context in which the vast majority of technological advances in the embryonic stage today will have been developed fully.

The question posited is "What will be the dominant cause of terrorist conflict in the year 2040?". The study argue that main motivations of long-term terrorism would be related to technophobia and this will constitute a fifth wave of modern terrorism in line with the framework suggested by Rapoport.

Methodology

The methodology followed here consists of the analysis of scenarios using a narrative description that allows a structured system of possible contexts to be identified. To differentiate it from "prediction", it adopts the term "scenario", thus underscoring its nature as a fictional account (Neumann & 0verland, 2004). This tool stimulates creativ-

ity, broadens perspectives, challenges established cognitive frameworks and generates new research questions (Jordán, 2016) (Ramirez, Mukherjee, Vezzoli, & Kramer, 2015)

The aim is to consider - and seek to answer - multiple questions of the "what if" type, imagining diverse futures (Barma, Durbin, Lorber & Whitlark, 2015). Scenario building juxtaposes the results of key causal variables in foreseen and unforeseen combinations in order to generate multiple future scenarios, some of which may be surprising but all are plausible.

Scenario building is not conditioned by the availability of evidence supporting a causal link between the variables or by the value of each variable. The scenarios are based on provisional assumptions concerning said links. Some of the scenarios may even be based on contradictory premises.

The technique requires a considerable selection effort when building the scenarios. The idea is not to set out all possible scenarios - the number would be unmanageable and the analysis of limited utility-, given that the aim is not to guess what will happen but rather to learn from these possible futures (Bernstein, Lebow, Stein, & Weber, 2000).

In addition, scenario building seeks to order and systematise the wealth of available information by outlining a limited number of future worlds. Accordingly, it divides knowledge into what we assume to be solid and linear trends and those that can be classed as unknown or shrouded in uncertainty (Jordán, 2016).

For the purposes of the present study, the construction of the aforementioned scenarios is based on a bibliographical review of the main foresight documents relating to technological, strategic and socioeconomic contexts, as drawn up by national intelligence agencies, business study services, think tanks and universities, particularly studies that map long-term models associated with exponential technologies. These trends have helped draw up plausible narratives that outline how the undesired social effects of certain emerging technologies could become factors that mobilise terrorism.

Recent security and defence foresight literature tends to coincide in three considerations of interest to the present study:

1. Terrorism will continue to exist as an instrument of subversion, coercion and socio-political destabilisation in the coming decades.

2. The growth of the systemic influence of terrorists and of other nonstate armed groups will be directly related to the emergence of a wide range of transformational technologies.

3. The symbiosis between organised crime and terrorism will become increasingly pronounced and the line separating the two increasingly tenuous (Basra & Neumann, 2016). In fact, organisations previously considered to be terrorist have become transnational criminal organisations driven by money and certain political objectives (Wang, 2010).

Meanwhile, five drivers - agents or factors that drive future change - and five trends that will determine the evolution of terrorism and the suggested scenarios have been identified (see Table 1) (Jordan, 2017), (Navarro & Villaverde, 2014):

Table 1. Trends and drivers associated with terrorism.

TREND	DRIVER
Technological advances in biomedicine	
Emergence of new ideologies	
Climate change	
Structural unemployment associated with automation	
Population increase	*Biological divide*
Transhumanism y bioconservatism	
Socio-political destabilisation	
New placebos	
Growth in megacities	

Source: Compiled by author

Five future terrorism scenarios

Scenario: The biological divide and the culture of discarding

By 2040, technology applied to medicine will enhance the capabilities of the human beyond mere cure. The advances will by numerous: nanorobots that move freely in our bodies seeking out tissue lesions; bionic arms osseointegrated in nerves; exoskeletons that improve stability in persons suffering from neurological impairment; brain-computer interfaces that enhance sensory capabilities; and pacemakers with built-in mini-propellors driven by the bloodstream. Among other benefits, these advances will increase life expectancy and the quality of life of millions in the short term (Harari, 2016). Broadly-speaking, the population of the western world will be an ageing one and, even if medical technology advances will lead to longer and healthier lives, more people will be at risk of degenerative diseases. Demographic change in Europe may eventually trigger inter-generational conflicts due to changing population structures (RAND, 2013).

Future access to major advances in biomedicine could also lead to a kind of "Darwinian effect" called the "biological divide" which would be a driver of technological evolution. This divide could favour the "survival of the fittest" and the creation of an enhanced social caste compared to other humans. On one side of the divide would be affluent elites able to access biological enhancement technology and, on the other, sectors of society without the financial capacity to do so. The democratisation of the aforementioned enhancement medicine could remedy the divide. Indeed, it is worth

recalling that many 20th century advances in medicine - including vaccines and antibiotics - commenced with the upper classes but ultimately extended to the entire population, thus contributing to reducing (not increasing) social divides.

Beyond the humanitarian vocation inherent in medicine, certain sectors in medical research aspire also to improve already healthy people. Possession of superior intelligence, impressive physical attributes, a prodigious memory and the ability to see infrared light, not to mention telepathy, could well become a desire for certain sectors of society. The biological divide would produce a scenario in which millions would demand access to technology to cure loved ones and enjoy greater personal wellbeing, both physical and mental. Such demands might remain strictly socio-political but they could also trigger radical alternatives which turn to subversion or dissidence to coerce governments, international corporations and public opinion to prevent the biological divide and defend the universality of medical progress. Lack of access by a large part of society to these advances could lead to the emergence of new crime associated with the divide, including black markets, clandestine surgery, traffic in biological implants and/or organs, or biohackers capable of hacking bionic devices.

However, the status quo described in this scenario should be preserved. A totalitarian state, working in collaboration with the multinationals who obtain financial gain from biological elites, could use motivation selection methods to consolidate their power and guarantee uniformly loyal police, intelligence services and armies (Shulman, 2010).

The biological divide could spawn discriminatory policies in favour of certain social elites or business corporations, or, in a worst-case scenario, regulation of those deemed surplus to requirements in what Pope Francisco has termed the "culture of discarding" (CARF, 2015). In socially and economically deprived areas, attentive terrorism could encourage insurgency for survival among the population.

Scenario: The new opium of the people

The biological divide outlined in the first scenario would propitiate the consolidation of socio-political ideologies associated with transhumanism and bioconservatism which could clash with each other in the future and spark political violence.

Transhumanism is an ideology that exalts technological progress and seeks to improve the human race, enhancing its physical and intellectual abilities. This improvement is not achieved naturally (as would occur with biological evolution) but by incorporating - among other emerging technologies - nanotechnology, robotics, biotechnology and Artificial Intelligence. Transhumanism aims to eliminate undesirable and unnecessary traits of the human condition, including suffering, illness, ageing and even death (Cortina & Serra, 2015). The widespread use of cyborg technology could foster a feeling of belonging to a subculture in all its facets.

For its part, bioconservatism is an ideology that is belligerent and even hostile towards technological optimism and transhumanism. Discontent with political institu-

tions and elites, coupled with growth in the immigrant population in many countries, will produce fertile terrain for populist discourse and an increase in far-left and far-right parties (National Intelligence Council, 2017).

Transhumanist parties are marginal at present but the traditional duality between left and right could gradually change to become a political and ideological opposition between bioconservatives (right) and transhumanists (left) (Alexandre, 2011).

The year 2040 could bring political controversy, a rise in activism, and social polarisation, but also the emergence of radical ideologies on both sides of the political spectrum who might choose violence to impose their views. Between 1978 and 1995, Ted Kaczynski, the so-called "Unabomber", sent sixteen bombs to different targets, killing three people and injuring twenty-three to protest against the technological evolution of humanity. In his 1995 neo-Luddite manifesto entitled "Industrial Society and Its Future", Kaczynski reflected as follows: "If you think that big government interferes in your life too much NOW, just wait till the government starts regulating the genetic constitution of your children" (Kaczynski, 1995).

A present-day anarcho-primitivist insurrection movement called "Individualists Tending Toward the Wild" (known by its Spanish acronym: ITS) has carried out a series of violent attacks with explosives on companies and has killed nanotechnology, chemistry and biotechnology experts. On 29 June 2016, ITS-Mexico claimed responsibility for the killing of an employee of the Faculty of Chemistry at the National Autonomous University of Mexico. The communiqué illustrates the belligerence of the movement against the concept of the "better tomorrow" associated with progress and technology:

> We don't believe in a "better tomorrow". We aren't "revolutionaries" nor do we identify with their recycled ideologies. We are individualists-terrorists driven by egoic goals. We are politically incorrect, immoral, and indiscriminate [...] We executed this man to show that we don't have any respect for the lives of the hyper-civilized of the university or anywhere else. We despise their routines, their norms and morality. We reject equality, human progress, tolerance, science, collectivism, Christianity, pacifism, modernity, and all of the other shit that reeks of civilized domestication. (ITS, 2016)

The emergence of individuals or terrorist groups linked to bioconservatism or the resurgence of neo-Luddites could see scientists, philanthropists, transhumanist leaders and technology firms become potential targets. At the opposite end of the terrorist spectrum, violent groups and movements associated with a radical ideology splintered from transhumanism might target bionconservative leaders with sophisticated attacks involving autonomous lethal weapons such as nanorobots, microdrones or killer robots.

Human biological evolution will foster the emergence of a new spirituality that will challenge the doctrinal approach of "classical" religions such as Judaism, Christianity and Islam. These new religions are unlikely to arise in caves in Afghanistan or madrassas in the Middle East. They are much more likely to come about in the research

laboratory of a corporation and will promise, on Earth and courtesy of technology, ancient rewards of happiness, peace, prosperity and eternal life (Harari, 2016).

Techno-humanism[1] - the gospel of innovation - and dataism[2] - the religion of data - are the two pseudo-religious trends that will nurture the souls of millions of followers in the coming decades (DuBravac, 2015). The 20th century was probably the century of ownership, whereas the 21st will be the century of use. But use of what? Data, to accumulate and process more information. The top technology giants operate on the basis of there being no limit to the amount of data that can be produced, gathered, traded and shared. However, connectivity is not just a means of exploiting data: it can also be a means of domination (Morozov, 2013).

The evolution in technology will occur in tandem with a change in the system of prevailing values, in which privacy is likely to be relativised, including an acceptance that its scope can be reduced in favour of greater connectivity, virtual sociability or free access to certain services. However, this change in attitudes is not incompatible with the opposing view that the authorities should limit the negative consequences of such decisions, particularly if adopted at a time when there was no clear understanding of the future effects of the voluntary disclosure of personal data.

Some of the new social and political demands will seek to force the authorities to adopt retroactive legislation to neutralise the asymmetrical power that will exist between individuals and the firms holding the data and rights of use. Such pressure could trigger instability in the legal system, not to mention conflicts with third countries if exceptional legislation is detrimental to the interests of companies under their jurisdiction.

Whereas one sector of the population will be horrified at the thought of the total loss of control over privacy, another will be convinced of the need for even greater progress in this field. A dataist, for example, will be forced to meet the demands of his techno-religion by maximising the flow of data by connecting as many devices, platforms and resources as possible. In addition, he will need to engage in proselytism and connect all the new flow of data to the system, including any heretics who refuse to be connected. Data flow blockages will be the worst capital sin in the eyes of dataism. The Internet of All Things will be the dataists' creed, while privacy, autonomy and individuality are temptations that impede their ultimate goal.

In the past, censorship involved information blocking. In the future, truth may become purely anecdotal. A wealth of information will exist that, if not accompanied by the necessary skills to convert it into knowledge, will risk trivialising important debates and become fertile ground for manipulation. Censorship in 2040 may involve the dissemination of massive amounts of irrelevant information, diverting attention towards wholly unimportant things, like a "new opium of the people"

[1] Techno-humanism seeks spiritual transcendence and posits that, in order to evolve, human beings need a hybrid body with AI.

[2] Dataism holds that the universe consists of data flows and that the value of any phenomenon or entity is determined by its contribution to data processing.

The rise of the aforementioned techno-religions while traditional religions stagnate could become a driver of risk, due to the clash between "official" religions and the new human dimension. The most radical beliefs will clash head-on with the new spiritual dimension that would challenge the dogma of age-old religions which advocate human limitations and an all-powerful God. Just as many Muslims and Jews refuse to eat food prepared in prohibited ways, similar beliefs could see groups shun products involving the unauthorised use of Artificial Intelligence (Boström, 2014).

Extremist offshoots of the big monotheistic religions could potentially target individuals, corporations and associations that represent technoreligions, identifying them as infidels or heretics who question the will of God.

Scenario: Climate of violence

The third scenario is related to climate change and the scarcity of basic resources, which will propitiate conflict and socio-political fragility. Climate change can exert influence in different ways.

To begin with, fragile ecosystems will hamper food security and access to water for millions of people. Water shortages - due to control of resources and also to the quality of the water - will cause demand to grow and the competition is likely to increase pressure on existing government structures, contributing to political instability. Less water means fewer crops and, consequently, higher prices. Climate change is likely to halt food production in many regions, increasing prices, market volatility and, as a result, the risk of protest, riots and social unrest (Jordan, 2017).

Secondly, severe flooding will hit densely populated areas, triggering coastal degradation and threatening the viability of low-lying parts, even before they become submerged, while also causing mass displacement and migration.

The average temperature of the Earth will continue to rise and heatwaves, droughts, fires, hurricanes and tornados will increase. The lack of rainfall will impair air quality and pollution will be an ever-present in large cities, leading to respiratory illnesses.

The general deterioration of environment quality due to air pollution, biodiversity loss and habitat degradation will impact adversely on the quality of life of individuals and cause large-scale migratory movements in search of greater environmental security.

Climate change will contribute to greater political instability and originate new conflicts due to the scarcity of natural resources and lack of guaranteed means of subsistence. Although not a new phenomenon and not always linked with terrorism, non-state armed groups will play an increasingly prominent role (Gartenstein-Ross & Zenn, 2017). They will evolve like a hydra, taking the form of militias, insurgent groups, warlords, mercenaries, paramilitary groups, cartels, street gangs, criminal organisations and professional terrorist groups associated with new ideologies influenced by fragile states, a lack of resources and climate change. (Jones and Johnston, 2013 In some resource-poor fragile states, nonstate armed groups will fill the void left by the state,

providing basic services to gain the trust and support of the local population (Lukas & Ruttinger, 2016).

The population groups affected will be vulnerable not just to negative climate change impacts but also to recruitment by terrorists, who will offer alternative forms of livelihood and financial incentives. The security challenges arising from conflicts over local resources and from large-scale violence and mass migration will be particularly marked where state authority and legitimacy are weak, thus feeding a vicious circle of fragility and armed violence. Social unrest caused by migration and the perception of an intrusive global culture will be more acute among those who strive to maintain their indigenous and traditional customs and beliefs and feel threatened by the changes. As today, marginalisation will continue to be a vector of radicalisation.

Scenario: Malicious use

One of the most stimulating concepts used in reflections on the potential risks of artificial intelligence is "malicious use", namely, the moment in time when an excellent technology begins to be counterproductive (Brundage et al., 2018). While it remains weak, AI behaves cooperatively but when it becomes sufficiently strong, it attacks and directly optimises the world in accordance with the criteria implicit in its ultimate values (Boström, 2012).

One such malicious use could arise with any industrial activity that makes extensive use of an AI aimed at optimising production efficiency and producing more at lower cost. Malicious use could occur if a machine designed to obsessively and relentlessly improve efficiency chooses to go beyond the proposed production goals and, faced with a lack of raw materials for production, extends the range of options, looking to other materials whose uncontrolled consumption would jeopardise the wellbeing and even survival of the human species (Boström, 2014).

This dystopian scenario has to be viewed in the context of the recurring fears concerning how automation may lead to a general loss of employment. Concern at technological unemployment has reared its head periodically since the Industrial Revolution, when English weavers and craftsmen were cast aside by the introduction of mechanical looms. In the 1980s, Pittsburgh, once known as the "steel city", suffered a major economic crisis which in turn led to a demographic crisis. Foreign competition, industrial automation and the national recession submerged it in a profound crisis that impacted on an entire generation of workers. Forty years later, Pittsburgh has re-emerged with an economy based on health services, education, technology and robotics. The city's renaiassance is an argument from history indicating that, even if automation may initially have a negative economic and demographic impact, it is a prior step to growth for many cities. However, experts also predict that the introduction of new industrial technologies will lead millions of jobs to be lost in sectors displaced by the new economic model.

The risk exists that the direct benefits of the process will be highly selective and be confined largely to the owners of the means of production: multinationals, investment funds, and elites that accumulate a high percentage of capital and profits.

The year 2040 could also see greater polarisation of wealth as algorithms exclude humans from the labour market and economic and technological wealth are concentrated in the hands of an elite, leading to unprecedented social and political inequality. Along with the disappearance of hundreds of occupations (Frey & Osborne, 2017), there will be increasingly large pockets of structural unemployment comprising individuals who lack the knowledge and skills required to fill the new jobs (Allen & Chan, 2017). The most important economic and social dilemma of the 21st century may well be what to do with the millions of people ejected from the labour market (RAND, 2013). If we add to this scenario the predictions by demographics experts that the world population will grow to around nine billion by 2050, the working middle class will suffer the biggest surplus in the history of humanity. It is not hard to imagine that millions of people could form a disgruntled, frustrated critical mass vulnerable to radicalisation by ideologies opposed to exclusion from employment and to machines replacing human beings. Paradoxically, the most advanced economies, hence those best placed to bear the cost of the investment associated with the change in economic model, will also be the ones at greater risk of political unrest (Frey, Berger, & Chen, 2017). The social divide between a sector of society that reaps the benefits of the new production model and a growing mass of excluded individuals will generate tensions for the viability of the political models of the welfare state. This will be due not only to the inability of the state to pay the everincreasing cost of subsidising a majority unable to meet its own needs, but also to the very legitimacy of the system itself, which will be questioned by disgruntled citizens who will become net contributors of resources and will be challenged by an indignant majority at a standstill in terms of wellbeing and lacking genuine possibilities of social betterment.

Political management of social unrest may also take on dystopian proportions. If governments fail to enable the majority of the population to share in the benefits of automation, they may encourage or allow excluded sectors to immerse themselves in virtual worlds that will supply them with the injections of placebo required to survive their grim everyday reality. Consumption of slow metabolism drugs - depressors - may also become a popular form of escapism (Boström, 2014) to calm the "discarded". This mass of potential addicts to new drugs and virtual worlds would be the perfect target for a narrative that encourages violent uprising against actors who, in order to preserve their privileged lifestyles, have condemned the bulk of society to a pseudo-vegetative state.

Coated with revolutionary overtones, the argument that "automation = poverty and oppression" may foster the emergence of groups linked to the far left and far right. Such groups would hold themselves up as the vanguard of the popular classes, who should fight digital capitalism to avoid subjugation by a wealthy and oppressive elite.

From the security perspective, the social conflict sparked by the First Industrial Revolution was essentially local in nature and was stifled by the state. What difference is there between that and the conflict that might arise if millions of jobs are eliminated in the 21st century? The difference will be that technology and data access will spread social conflict globally.

Technologies associated with virtual sociability will continue to facilitate the organisation and spread of social protests that transcend borders and trigger other protests with increasing speed. Permanent and real-time knowledge of events abroad will afford the opportunity for violent responses to be orchestrated through new and hard to trace communications networks.

The most belligerent and revolutionary responses to automation could generate synergies with individuals or terrorist groups linked to bioconservatism, neo-Luddism or anarcho-primitivism, potentially leading to collusion as regards propaganda and tactical objectives.

Scenario: Future polis

By 2040, around 70% of the world population will live in urban areas, drawn by access to work, resources and security. The main growth in urbanisation will occur in Africa and Asia.

The ensuing urban dichotomy, in security terms, can be explained by the extrapolation to the absurd of contemporary examples:

1. On the one hand, the consolidation of various city-states, Singapore for example, which will become global trade hubs and poles of technological innovation. Many of these cities will be home to biological elites and major corporations. They will become examples of soundly managed economic and population growth, capable of creating cities which are not just economically powerful but also technologically advanced and culturally vibrant, not to mention pleasant to live in.

2. Conversely, we find cities such as Lagos, which have failed, or have been unable, to manage their growth properly. These spaces are excessively populated and suffer structural problems of mobility, deterioration, corruption, disease and death. Lagos has occupied the entire island and has spilled over via its numerous congested bridges to extend twenty-five kilometres inland. Millions of people live on boats with no electricity or hygiene services given that the drainage and sewers are so inefficient that faeces float into dwellings when it rains. Police are too few, ineffective, unpredictable and dangerous. Violent crime has become a routine feature of daily life and many aspects of community culture, such as libraries and cinemas, have disappeared (Gandy, 2006). Failed by the police and judges, the people have set up neighbourhood patrols which confront criminals with machetes and shotguns. It is estimated that by 2050 the population of Lagos will

have grown by a further 50 percent, reaching 16 million, making the city the twelfth largest in the world.

In 2040, the outskirts of some cities with over 10 million people will see the growth of megasuburbs that will house around 2 billion people in extremely harsh conditions, excluded from employment and victims of the biological divide, a situation that will incubate resent, anger and frustration. These degraded, crammed and dangerous urban clusters will prove ripe for the emergence of "sanctuaries of crime" and radical ideologies, as well as the hydra of non-state armed groups. Ideal places to produce and transport drugs, persons, nuclear waste and weapons, not to mention for extortion and kidnappings for political or financial motives.

In these sanctuaries, criminal organisations will offer their support to terrorist structures for reasons of ideological or religious affinity or simply for practical reasons involving material exchange or economic transaction (De la Corte, 2013). Rapid urbanisation will lead to an increased risk of urban, as opposed to rural, insurgency. The fighting between insurgents and the army in cities such as Aleppo and Mosul illustrates the difficulties that arise in a three-dimensional environment with limited fields of vision due to the urban terrain, which lends itself to the use of explosives and snipers. Armed conflict against the hydra of non-state armed groups will, in many cases, move to urban areas in which fighting is very different operationally and tactically.

Conclusions

The theory of collective action applied to the emergence of terrorist groups (Oberschall, 2004) usually places emphasis on four key propitiating elements:

1. The existence of *social discontent and dissatisfaction*, which the terrorist group taps into, taking up its demands. The greater the dissatisfaction, the more likely certain segments of society will sympathise with the terrorist group.

2. The existence of *legitimising ideologies* that justify the use of violence and articulate the social discontent, providing an explanation for its causes, identifying enemies and proposing lines of action.

3. The *capacity to organise* and maintain a viable terrorist structure capable of operating in a hostile environment.

4. *Political opportunity*. This may take the form of circumstances such as alliances, a favourable social climate, or specific triggers that accelerate the violent radicalisation of certain sectors of society.

The conditions that render such violent activism viable are not exceptional but rather tend to be generated over time and in very different contexts. In the five scenarios

outlined in this paper, one can clearly discern the possible emergence of new causes of dissatisfaction, old and new ideologies that will legitimise terrorism, new instruments to facilitate clandestine organisations, and structures for political opportunity that will increase the appeal of such radical tactics. The multipolar future will enable old rivalries to resurface and new ones to emerge (Jordan, 2017). Inequality exacerbated by the biological divide, structural unemployment, climate change, the rise of citystates and the advent of new technologies will all combine to increase sociopolitical instability and will form the perfect growth medium to spawn radicalisms.

Terrorism will continue to exist as an instrument of coercion, subversion and sociopolitical destabilisation in the coming decades, spurred by current or future ideologies. The symbiosis between organised crime and terrorism will prove increasingly productive, with the consequence that the maximalist and ideological goals of terrorism will, in certain cases, become subordinate to purely criminal interests.

Although technology is not the causal factor or the only element intervening in all the possible dystopian outcomes set out above, clearly the risks and opportunities of the future will be heavily conditioned by the emergence of a new technological context and its power to transform social values, the economy and the distribution of power.

The major strength of technophobia as a potential mobiliser of the fifth wave of terrorism is its cross-cutting nature, which enables it to serve as a cause accepted by any sector of the societies of tomorrow, regardless of their ethnicity, beliefs, political culture or degree of material development. Far from representing a problem, the difficulty in identifying who exactly is responsible for the technological dystopia which must be fought will actually facilitate violence. Existing terrorist groups and any new ones to emerge in future will be able to adapt their respective agendas and priorities to include opposition to a technological society and identify targets best suited to their own interests as the enemy to be overcome. This will allow the creation of synergies that may appear implausible today: jihadists, anarchists, Christian extremists, anti-animalists, etc, all aligned in the fight against a diffuse enemy.

With growing social and political grievances, such groups would inevitably idealise an earlier period in history (prior to the technological divide) to which they would long to return through violence. However, this does not mean that the terrorist violence of tomorrow will be a replicate of present-day tactics. Rather, and as has occurred throughout the history of terrorism, groups will avail themselves of the instruments created by the very society they aim to destroy. The level of technical sophistication of these actors will vary according to their ability to rationalise the above contradictions and also according to their freedom for action in a repressive environment.

The likely scenarios set out in this paper are, it should be stressed, just that: likely. However, they encourage us to look at trends, uncertainties and hypothetical outcomes with a more open mind and with greater sensitivity.

Harmonising the future of humanity with the defence of universal values is the challenge to be faced in the coming decades, perhaps by focusing less on technology and more on how it affects people.

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