Failure to supply pure public good "defense" in a multi-polar nuclear world

Moshe Yanovskiy,[1] *Yehoshua Socol*[2]*,*
Georgiy Syunyaev[3]

Abstract

The main point of the paper is compatibility of pure and mixed public goods of normal quality simultaneous provision. The main hypotheses tested: elected politicians and bureaucrats' have strong incentives to choose wrong strategies in foreign and military policies if the state extends its responsibility far from the pure public goods provision limits.

We are proposing here the case of the nuclear warfare strategy choice description. The Democracies' key policy objectives drastic change caused stable deviation from the optimal decision (nuclear deterrence efficient strategy) and, respectively, fall in the "defense" public goods' provision quality.

Statistical analysis of Great Powers military spending historical trends used to test the main hypothesis. Preliminary statistical analysis fails to reject it. We believe bureaucratic competition for the responsibilities, staff and the budget provides satisfactory explanation of this phenomena.

Attempt to reason policy advice for the elected leaders is the practical goal of the paper and. For nuclear conflict we developed reasoning of the Democratic society crucial relative advantage as ability to stand and to survive under WMD[4] *attack.*

Introduction

A "leftist politician" in the present work is a certain "ideal type" of politician in a Rule of Law democratic state. Such a politician argues for expanding the functions of the state *__beyond supplying the pure public goods__*. A "leftist politician" considers these new functions (supplying mixed public goods, controlling the behavior of citizens and markets) as the main ones for a modern state.

A "rightist (conservative) politician" is the proponent of views and preferences that are the mirror opposite of those of the "leftist politician." He or she assumes that the only function of the state is to supply pure public goods (that is, the state only performs the function of the "night watchman").

---

[1] Gaidar Institute for Economic Policy, Moscow yanovskiy.moshe@gmail.com; janovski@iet.ru
[2] socol@FalconAnalytics.com ,
[3] State University – Higher School of Economics, Moscow gsyunyaev@hse.ru
[4] Weapon of Mass Destruction.

When dying for one's country is no longer considered an act of valor, killing the enemy is regarded as a crime with "excessive" or "disproportionate" force[5]. The army is increasingly forced to use methods of the police: the terms "incrimination" and "collateral damage" become central. Accordingly, the military bureaucracy begins not to encourage victory but to punish for it, to the point of putting the winners on trial. After all, victory – according to the new morality – doesn't exist and cannot exist; what can exist is "excessive use of force." In fact, the winner in any war has either "excessive force" that is, a general superiority, or concentrates his superior forces at key locations. Thus, the "disproportionate" or "excess" use of force is, if not synonymous to victory, then the only known way to achieve it. And precisely this method the leftists blocked. Indeed, imagine that an officer with limited forces and means led a successful operation against the terrorists. This operation, especially its recurrence, casts doubt on such a useful for the bureaucrat idea that it is impossible to defeat terrorism with military force. What is more important for a bureaucrat - a useful idea or effectiveness of the army? The officer is placed before a choice – career or victory[6]. Many people choose their careers, others are eliminated.

W.Niskanen (1971) proposed simple model for the bureaucrats' incentives explanation. He presumed for corruption free case, they are maximizing resources redistributed (spend) under their direct control. This model broadly used in economics as default for respective problems analysis.

Presuming "niskanen-type" bureaucrats' preferences we are focusing on the Old Democracies' budget history (general trend to more burdensome state is illustrated by Diagram 2 below). The story could be described as follows.

"Military and miscellaneous spending" structure dominated before General Suffrage. Since General Suffrage Military spending share fallen; social spending share sharply increased and currently close to "saturation level" (restricted by governments' ability to collect heavy taxation burden; Aidt, 2006; Meltzer and Richard, 1981[7]; Acemoglu,

---

[5] See SSgt. Wuterich case (US vs. Wuterich). The charge formally sounds like "", but actually commander ordered return fire and use grenade to save his men. He saved his men actually. The islamistic militants actually responsible for civilian deaths almost never mentioned in the case (See Annex 2). It is hard to imagine similar case during or after WWII without strong bureaucratic demand for alive symbol of military's brutality and inability to resolve problems. Let's compare US commander in chief behavior in the case of

[6] See for some examples our report " Israel and Terrorist organizations 2005-2011: Political competition, "Social Justice" revolt and Government's reactions on terror" presented.

[7] Meltzer–Richard hypothesis: unequal income distribution could cause a majority for redistribution – more poor people enfranchised to vote, more redistribution caused. Example of empirical test: Borge, Rattsø, 2004.

Robertson, 2006; Fitch, 1953 found and presented the trend in 1953 already; now the trend looks much more obvious – see Diagram 3).

Debts' repayment and interests on these debts share is last decade's champion of growth rate among the budget expenditures.

Political and bureaucratic competition caused not only budget shares redistribution.

Power and responsibility generally predefines effective claims on a budget share. So, bureaucratic claims on additional spending should be reasoned by the bureau's ability to resolve more public problems, provides more public goods (or "better quality" public goods) and to take more challenges. The minimal goal targeted by a bureau could be public perception formation about ability (or competitors' disability) to solve the problems. So, ideological stamps like "war is no solution", "No winners in nuclear war" could be reasonably interpreted as "social" bureaus' attempt to win war on budget funds against the defense department.

New military justice approaches ("excessive use of force" criminalization) and new "mainstream" parties' ideological clichés (like above mentioned cliché "war is no solution", "No winners in nuclear war") targeted "militarists" under bureaucratic competition. This competition development actually restricts if not undermines rational optimization possibility under military strategy choice process in the democratic countries. So "war is not solution" mantra becomes self-fulfilled prediction trap.

That is why we chose the 2-nd scenario (see table 1 below) as a key subject of our analysis. Authoritarian state nuclear challenge aggravated democratic state possible failure in strategy choice explains our focus on this very scenario.

To win nuclear war? Why not...

To be or not to be? Dealing with nuclear aggression

The future world is going to be a world with many nuclear-possessing actors, whether we wish or (probably) not. Anti-proliferation efforts have yielded up to now very limited results, and it is widely believed that any state which is determined to acquire nuclear weapons – will "build, buy, borrow or burgle" it[8].

While literature investigating the hypothesis has concentrated on the size of the public sector, Borge and Rattsø's analysis exploits data about the tax structure in decentralized government in Norway.

[8] Nudelman Raphael, Interview with Martin van Creveld. Available (Russian translation):
http://gazeta.rjews.net/nudel.shtml

Assuming that rogue states will acquire nuclear weapons, we have actually two alternatives:

a) to surrender,

b) to think.

This article suggests the second alternative. The nuclear warfare, being calamitous, is nevertheless, unlike popular perception, far from being apocalyptic. A steadfast and determined stance – including the willingness and ability to suffer heavy losses, in both human and economic terms – is the price democratic societies must be willing to pay in order to effectively battle aggression on all levels. He who wants peace now will not receive peace ever (Aumann, 2006).

The article is organized as following. First, we make a short overview of the nuclear warfare. Then, we consider possible scenarios of nuclear warfare in a multi-polar nuclear world, arguing that *a democratic society has pretty good chances to win against a totalitarian nuclear-possessing state*. Afterwards, we focus on two technical issues of principle importance – targeting doctrine and civil defense. Regarding targeting, we claim that a democratic state should target first of all the infrastructure of a totalitarian adversary, rather than its military targets or population centers. Regarding civil defense – we support the claim that it is not only feasible and efficient, but just indispensable. None of these ideas is completely novel, but all need elaboration in the common framework.

Weapons are seldom used without purpose, without the hope of achieving one's aims and defeating one's enemy. A democratic society must do everything possible to deprive terrorists and rogue states from harboring such hopes. Concessions, gestures of good will on the part of a democratic society, are seen as signs of weakness by totalitarian societies and lead only to an escalation of terror, as has been demonstrated by many authors (Sharon, 2006). Israel Aumann (2006) summarizes:

"...in such a situation concessions achieve the exact opposite of what they were meant to achieve when both sides are interested in peace. They encourage the aggressive side to demand and receive more and more and base the perception that the rope can be stretched further and further. Eventually the rope tears and there is a war in conditions far worse than what would previously have transpired, before the concessions."

A steadfast and determined stance – including the willingness and ability to suffer heavy losses, in both human and economic terms – is the price democratic societies must be willing to pay in order to effectively battle aggression on all levels. As Winston Churchill put it:

those who, given the choice of war or dishonor, choose dishonor, will have both war and dishonor.

Table 1. Nuclear conflict – possible scenarios

Sce-nario #	Potential Belligerents	Scenario Probability	Comments
1	Rule of Law market democracy vs. Rule of Law market democracy	Pretty low	Outside (beyond) the scope of the article analysis because of low probability
2	Authoritarian regime (rouge state, "roving bandit") vs. Rule of Law market democracy	Reasonably higher than all of the rest options	The democratic state decision making process in the case vulnerable of public perception (education, elected leaders strategic choice); it could be analyzed by the Public choice theory instruments; Rent extraction motive of the roving bandit
3	Terrorist organization vs. Rule of Law market democracy	Pretty low	See above, scenario # 1 comment
4	Authoritarian regime vs. Authoritarian regime	Likely option	Decision making process has pretty weak dependence of public perception of the possible outcomes and of the public opinion itself. The only significant aspect couldn't be ignored by the chieftain: the action (attack) or absenteeism shouldn't be considered by any possible challenger (external and internal) as a signal of the regimes' weakness
5	Terrorist organization vs. Authoritarian regime	Pretty low	See above, scenario # 1 comment
6	Other (unclearly definable belligerents)	Likely option	India vs. Pakistan for example; beyond the scope of the article because decision making process is quite different from scenario #2 (closer to scenario # 4)

As happened in the wake of 9/11, a single nuclear attack – and very possibly even the fear of one – may well significantly impact the lifestyle of modern societies world-wide. Such change would not be due to direct damage to life and property but to extensive (and arguably justified) counter-measures that societies may adopt. In view of the foregoing, it seems likely that at least the current overestimation of radiation hazards ("radiophobia") will dissipate in

the wake of the first "live" nuclear attack. This in turn will mean that indirect economic damage – currently estimated as astronomical – will in actuality be far less than feared.

Can non-state actors gain access to nuclear weapons? In principle, yes, particularly if we speak of a time frame measured in decades and take into account future proliferation. Having said that, the complexity and high unit price of nuclear devices reduces this likelihood to sporadic and accidental access.

The amassing of a significant above-threshold nuclear arsenal by an irresponsible government also seems improbable. The more likely scenario is that it would either use its nuclear capability at the first opportunity, or become responsible, or at least rational. The question of rationality is not necessarily connected to the question of democracy, as attested to by the world's experience with the USSR over a period of 40 years.

We do not imply that a rational government would never initiate nuclear aggression. We claim, rather, that such a decision would be based on careful and rational, though probably erroneous, judgments. E.g., it was reasonably argued[9] that Japan would probably never have attacked Pearl Harbor had they not incorrectly assessed the determination of the United States to wage war until victory when attacked.

Let us now consider state-scale nuclear warfare. According to popular perception, there would be no winners in such a conflict, as implied by the term "Mutual Assured Destruction" (MAD). It is believed that MAD concept was central to the nuclear standing of the two super-powers during the Cold War, however this is not exact. While the US scientists and intelligence believed in MAD, the USSR certainly considered possibility of victory in full-scale nuclear war and acted accordingly[10]. We shall not discuss the question (fortunately an historical one) of MAD between super-powers – though Herman Kahn reasonably claimed that even in the case of all-out nuclear interchange of 5,000 MT from each side, "life would go on" and it would be possible to rebuild the destroyed cities in about 10 years (Kanh, 1960). With reference to a possible regional nuclear conflict between a rogue state and a democratic one, the no-winner scenario is probably false. An analysis by Anthony Cordesman et al. regarding a possible Israel-Iran nuclear conflict estimated that while Israel might survive an Iranian nuclear blow, Iran would certainly not survive as an organized society (Cordesman, 2007). Even though the projected casualties cited in that study seem to us overstated, especially as regards Israel, the conclusion rings true.

---

[9] *United States Strategic Bombing Survey Summary Report (Pacific War)*
[10] PIPES, Richard, *Vixi: Memoirs of a Non-Belonger*, p. 132-144.

Also in general, citizens of democratic societies believe in their values and trust their government, and are thus more likely to be motivated and determined to fight (Socol, Yanovskiy, 2011). There is, however, an additional aspect specific to nuclear warfare which favors democracy. In a nuclear conflict, due to the extremely high intensity of fighting and extensive damage to infrastructure, the central government can be expected to loose its ability to govern and maintain direct control already during the early stages of the conflict. This was *not* the case during WWII until the very end. This in turn means that people's ability to make decisions and act independently, their devotion to their mission in the absence of direct commands and the fear of immediate punishment, is of primary importance.

Due to the extreme high-intensity ("above-conventional") of nuclear conflict, it is nearly certain that such a war, no matter its outcome, would not last for years as we have become accustomed to in current low-intensity conflicts. Rather we should anticipate a new geo-political reality: the emergence of clear winners and losers within several days or at most weeks after the initial outbreak of hostilities. This latter reality will most probably contain fewer nuclear-possessing states than the former.

A country emerging victorious from nuclear warfare, even having suffered extremely high losses, is anticipated to not only gain territory, but also to attain extremely high international standing and credibility, which would then translate into massive international investment. As a consequence, extensive destruction and economic damage may be repaired rather quickly, as was the case, ironically, in post-war Germany and Japan.

Targeting Doctrine

The targeting doctrine of a democratic state involved in nuclear warfare requires careful consideration. There can be little doubt that terrorists or rogue states will target population centers, correctly assessing that human life is the highest value in a democratic society, and that by destroying lives they will inflict the greatest damage. The correct response is not necessarily symmetric. As the aim is to inflict the greatest damage to the aggressor, in order to achieve this we must play our game, not theirs. A tyranny is relative insensible to the loss of human life, unless the affected population constitutes its power base. On the other hand, a dictator's paramount concern is his continued ability to prosecute his act of aggression. It is extremely instructive to consider Allied experience in World War II:

"The importance of careful selection of targets for air attack is emphasized by the German experience. The Germans were far more concerned over attacks on one or more of their basic industries and services – their oil, chemical, or steel industries or their power or

transportation networks – than they were over attacks on their armament industry or the city areas. The most serious attacks were those which destroyed the industry or service which most indispensably served other industries. The Germans found it clearly more important to devise measures for the protection of basic industries and services than for the protection of factories turning out finished products."[11]

The list of high-priority targets of more than half a century ago – oil, power stations, transportation etc. – needs to be carefully studied by relevant agencies. Direct attack against nuclear facilities – almost certainly heavily protected and widely distributed – may well be ill advised.

Civil Defense

Clearly, the ideal defense against nuclear attack is to intercept all enemy missiles. This solution, however, may be not feasible. Robert Harney writes:

"The United States should give careful consideration to implementing any National Missile Defense beyond that needed to defend against the minimal threat (terrorist, renegade, or accidental launches). Any capability beyond the minimum may inspire an adversary to engage in a one-missile-for-one-interceptor arms escalation that could favor the adversary from an economic perspective." (Harney, 2000).

On the other hand, civil defense can be expected to be extremely efficient, decreasing the number of casualties by factor of 20 or more – which can easily be the difference between victory and collapse. The US Strategic Bombing Survey (SBS) report, compiled at the onset of the nuclear age and based on the initial data collected after the use of nuclear weapons against Japan, stated:

"The experience of both the Pacific and European wars emphasizes the extent to which civilian and other forms of passive defense can reduce a country's vulnerability to air attack. Civilian injuries and fatalities can be reduced, by presently known techniques, to one-twentieth or less of the casualties which would be suffered were these techniques not employed. This does not involve moving everything underground, but does involve a progressive evacuation, dispersal, warning, air-raid shelter, and post-raid emergency assistance program, the foundations for which can only be laid in peacetime. The analysis of the effects of the atomic bombs at Hiroshima and Nagasaki indicates that the above statement is just as true and much more terrifyingly significant in an age of atomic bombs than it was in

---

[11] *United States Strategic Bombing Survey Summary report (European War)*

an age of conventional weapons. Similarly, economic vulnerability can be enormously decreased by a well worked out program of stockpiles, dispersal and special construction of particularly significant segments of industry. Such a program in the economic field can also be worked out satisfactorily only in peacetime.[12]

The above estimation of civil defense efficiency factor as 20-fold, should be considered as conservative rather than optimistic. This is demonstrated by the following simple calculation. Let us first consider the best available protection – underground shelter. For 20KT nuclear explosion, such shelter is destroyed and all its inhabitants die at distance of no more than about 200 m from the explosion point[13]. At larger distances, the shelter suffers at most light damage with near-zero casualties. On the other extreme of no civil defense actions at all (out-of-the-blue strike), as it was with the two nuclear bombings of Japan, the distance of 50% mortality was estimated as 1,300 m[14]. For the purpose of rough estimation let us assume that all people closer that 1,300 m are killed, while all the rest are spared (this assumption fits well the estimation, made by the British mission to Japan in 1946, that the total number of killed by an out-of-the-blue Hiroshima-scale nuclear strike in London will be about 50,000[15]). Then the surface of 1,300-m-radius circle (those killed in case of no civil defense) is larger than the surface of 200-m-radius circle (those killed in case of fully-employed civil defense) by the factor of about 40 (since $[1,300/200]^2 > 40$). And this is before we speak about progressive evacuation and dispersion.

Still years later, the value of civil defense was questioned, culminating probably in an ambivalent and implicitly unfavorable chapter in the report prepared by the US Congress Office of Technology Assessment (OTA) in 1979[16]. The OTA cited many technical problems pertaining to civil defense but, the truth to be said, failed to pinpoint any unsolvable problems.

The OTA analysis was based on two implicit assumptions: 1) No long-term civil defense effort will be made. 2) In case of nuclear emergency, social order will collapse as soon as the government fails to provide enough consumables and police. Both assumptions are at least questionable. Long-term civil defense planning during peacetime is essential, as stressed in the original SBS report cited above. The OTA concluded, for example, that "the installation of shelters in new construction, or "slanting", is preferable [to adding shelters to existing

---

[12] *United States Strategic Bombing Survey Summary Report (Pacific War)*, p. 30
[13] GLASSTONE, Samuel and DOLAN, Philip J., *The Effects of Nuclear Weapons*, sec. 3.73 and 5.160
[14] Ibid., sec. 12.17
[15] *The Number of Atomic Bombs Equivalent to the Last War Air Attacks on Great Britain and Germany*.
[16] *Office of Technology Assessment*, p. 49-50

buildings], but could take as long as 20 years." Had the "slanting" program been started in the wake of that report, it would have been completed 10 years ago; in practice, little if any effort was made. As for the assumption of a relatively immediate collapse of social order – this is actually an unfounded accusation leveled at democratic societies which contradicts documented experience. E.g., during the recent 2006 Lebanon War, government agencies performed with questionable efficiency in the north of Israel, yet despite this there was not even the slightest sign of a collapse of social order. In fact, a number of NGOs proved to be much more efficient at providing essential services. More generally, historical experience shows that private initiative really proves to be efficient and competitive even in some niches of pure public goods – private security, local needs to maintain legal order under emergency, self-defense based on the 2-nd Amendment right, and even outstanding cost-efficiency of some intelligence operations, like Simon Wiesenthal's Nazi hunting[17].

The main reservation of the OTA report regarding civil defense was that "some observers...argue that a vigorous civil defense program would induce people to believe that a nuclear war was "survivable" rather than "unthinkable", and that such a change in attitude would increase the risk of war". It seems obvious that today just the opposite is the case: by considering nuclear war "unthinkable", democratic societies actually provide terrorists and rogue states with an additional powerful incentive for increasing their nuclear capabilities, thus increasing the risk of war.

Civil defense activities in democratic societies need to be decentralized. The construction of shelters should, to a large extent, be the responsibility of citizenry and local government, with central government providing standards and incentives. Shelters should be dual-use for at least two reasons. Firstly, only continuous routine occupation guarantees that the shelter will be ready for emergency use; experience suggests that non-dual-use shelters tend to become filled with junk, flooded etc. Secondly, dual-use shelters are simply much cheaper. In private homes, basement floors (upgraded to very efficient shelters) may be routinely utilized for such things as home cinema systems, billiards and table-tennis. It should be noted that Israel has much practical and very positive experience with protected spaces[18], demanded by law in every structure and every private apartment erected since the early 1990's. Such spaces in peace time serve the function of a standard room without significant loss of functionality. Only marginally increasing overall construction costs, they not only serve the direct purpose of providing protection from shells and missiles, but also significantly increase

---

[17] *http://www.wiesenthal.com*
[18] *Israeli protective building standards*

the ability of structures to withstand seismic activity. Most, if not all, underground public areas such as subways, underground pedestrian crossings etc., can be upgraded to extremely efficient shelters with relative ease.

Finally, it should be noted that many civil defense measures yield considerable side benefits. Hardening buildings and infrastructures is beneficial not only in a nuclear warfare scenario, but also in cases of earthquake or tornado, not to mention "conventional" terror. For example: hardening electrical and electronic systems against electromagnetic pulse (EMP) increases costs by only 1-3%, but results in improved stability and performance (Foster, 2004). And dual-use underground shelters in their routine use as subway stations, pedestrian crossings, parking lots, shopping centers etc. will significantly contribute to urban space and energy saving, and therefore environment preservation and general betterment of the society.

Goals and outcomes

As the objectives targeting is functions' of political choice and bureaucratic supporting job, following table provides illustration to the simple idea: you could target victory in the conflict but lose; you couldn't win if you are not going to.

Table 2 Objectives Targeted and outcomes of some military conflicts

Conflict, war and belligerents	Strategic plans' objective	outcome	comments
UN vs. Axis WWII	Enemies' defeat ("unconditional surrender")[19]	Axis surrender	
USA vs. USSR (cold war plans for Nuclear war)	Containment OR Enemies' defeat (surrender) in case of war	Cold war won by USA	The Cold War has being accompanied by Leftists' (liberals') campaign for moral delegitimization of US led coalition military efforts[20]
USA led coalition, War on Terror (2001-2008)	Throw back and Containment	w/o clear outcomes	Belligerent should be defeated a hardly identifiable
USA, Israel vs. militant totalitarian regimes (nuclear confrontation)	Containment only	Still unclear	
USA, Israel confrontation vs.	w/o clearly specified goals	Democracies negotiates	USA is financing terrorists organizations

[19] See for example Anglo-Soviet-American Conference, Moscow, 1943 Declaration on General Security (preamble)   http://www.ibiblio.org/hyperwar/Dip/AxisInDefeat/Defeat-1.html
[20] See, for example Lee S. (1988)

Conflict, war and belligerents	Strategic plans' objective	outcome	comments
terrorism since 1960-ties		about large scale concessions to appease terrorists	(PLO) including salaries for murderer jailed for life in the Israel[21]

Why to choose wrong strategy?

Nuclear disarmament race

The civil bureaucrats naturally should become fond of the idea of the impossibility of winning the war. Military officials could find their own advantages in this myth as well. If winning the war is impossible, then the main test for military bureau is canceled. Tiny minority of risk-lover military leaders only could be interested in regular examination of armed forces quality (power). Risk-averse military bureaucrats inclined to spend more for Army & Navy but never test the results of the spending.

Military bureaucrats, together with their civil colleagues, profit from such benefits of the "new order" and the social state as lifetime employment, weakening transparency and accountability, and most importantly, from the decrease in responsibility for the result. An illustration of this point is the following story (which sounds more like a joke) as related by Richard Pipes, who held a high position in the Ronald Reagan administration. An officer was making an official report at the U.S. Air Force headquarters when the chief of staff interrupted him: "Stop calling the USSR an enemy. It is out opponent. Our enemy –is our navy. "[22]

US acting Administration shows readiness to reduce nuclear arms stockpile, reduce " … role and numbers of U.S. nuclear weapons"(NPR review, 2010). Meanwhile, Russian doctrine allows first use of nuclear weapons[23]. China communist leadership couldn't be reliably prevented from military adventures without assured destruction credible threat, as proven by "Cold war" experience. We couldn't develop the issue in current report, but we

---

[21]See: http://palwatch.org/main.aspx?fi=157&doc_id=5001 (According to the first article of the Palestinian Prisoner Law 2004/19); see also http://www.israelifrontline.com/2011/08/israel-works-to-stop-monthly-payments.html

[22] Pipes R. "Vixi: Memoirs of a Non-Belonger". Yale University Press, New Heaven & London 2003. http://yalepress.yale.edu/book.asp?isbn=9780300109658

[23] Russian military doctrine – see official text (in Russian) http://news.kremlin.ru/ref_notes/461, para 22 reserves possibility of president approved first use of Nuclear weapon.

should stress the strengthening the new Nuclear arms holders incentives to use their small arsenals under current US policy and military justice trend.

Nuclear disarmament is just a Special Case of risk averse strategy substituting Offense by broad scope of expensive and sophisticated solutions, excluding responsibility for "excessive use of force" etc. Hence, traditional military doctrines based upon historically well proved assumption about deterrence as a best mean of aggression prevention is rejected.

Another rational reason for this deliberately wrong for the nation defense needs choice could be illustrated by pretty simple statistical analysis.

Inter-bureaucratic competition: few statistical illustrations

> **Hypotheses tested:** **General Suffrage and Independent Civil service institution could cause or even create public (electoral) demand for Welfare State. The left wing populist parties arising and strengthening could be interpreted as this demand manifestation.**
>
> **Welfare state cause both sharp increase share of public spending for mixed public goods provision making this functions of the state dominant and relative share of public spending for defense fall (even if absolute value remains stable); so the latter functions became secondary.**

Data
The initial Sample: Old Democracies experienced taxpayers' democracy (suffrage not general);

The final sample for the presented Panel data analysis: Old Democracies - Great powers (USA, UK, France, Germany) only, to eliminate or at least to mitigate factors of neutrality and umbrella takers incentives consideration and analysis.

Pure public goods key indicator: Military expenditures as a share of central government total expenditures.

Data sources:
National Accounts, Government spending
- Mitchell (2007), US federal budget historical tables,
- US census historical data http://www.census.gov/compendia/statab/past_years.html
- Sutch Richard, Carter Susan B. (ed.) Historical Statistics of the United States Millennial Edition online http://hsus.cambridge.org/HSUSWeb/toc/hsusHome.do
- World Development Indicators of World Bank

Electoral statistics

- "Parties and elections in Europe" http://www.parties-and-elections.de/ ;

- Tanin-Lvov A."Elections around the World. Encyclopedic Reference-book" Moscow, "Rosspen", 2001 (in Russian);

- Official vote counts for federal elections from the official sources compiled by the Office of the Clerk US House of Representatives. http://clerk.house.gov (http://clerk.house.gov/member_info/electionInfo/index.aspx)

Military expenditures:

- National Material Capabilities (v3.02) data base, "Correlates of War" project http://www.correlatesofwar.org/COW2%20Data/Capabilities/nmc3-02.htm

- Eloranta Jari "Beyond the Void? implications of Hegemonic Competition and the Lack of American Military Leadership on the Military Spending of European Democracies, 1920-1938", 2010 http://eh.net/encyclopedia/article/eloranta.military

- Eloranta Jari Struggle for Leadership? Military Spending Behavior of the Great Powers, 1870—1913   University of Warwick, Department of Economics, 2002

- Eloranta Jari Warfare or welfare? Understanding 19th and 20th Century Central Government Spending Jari Eloranta No 699 Warwick Economic Research Papers Department of Economics University of Warwick, 2004 http://www2.warwick.ac.uk/fac/soc/economics/research/workingpapers/publications/twerp699.pdf

Table 3. List of Variables

#	Variable	ID	Description, comments
Panel data analysis			
1	Military Expenses share (total Government Expenses %) **Dependent**	Me_totgov	
2	10th Lag of Military Expenses share (total Government Expenses %), independent	L10.megovernmentexpenses	because interval between observation = 10 years
3	General Suffrage (GS) independent	gs	(-1, 0, 1) (-1) Marked observations related to taxpayers' democracy institutions; (0) Marked observations related to transition to GS, non-taxpayers already could vote, but not everybody (f. ex. without woman franchise to vote) (1) Observation under GS

4	Independent Civil Service	independent civil	(-1) Civil service dependent on elected politicians; (0) Independent Civil Service (1) Independent Civil Service & Public Service Unions' strike activity OR unbroken bureaucratic tradition state servicemen more 3% of Labor force OR reforms caused by bureaucracy political control failure;
5	Socialist both independent and Dependent (on var. (2) and (3)	Socialist	Votes share (%) - Electoral support of Anti-capitalist party, promoting various restrictions on free market and the exploitation of free market for large scale redistribution; For electoral support measure counted outcomes of the elections preceding the year of observation
6	10th Lag of Socialist	L10socialist	The same, 10 years lag (because interval between observation = 10 years)
7	Communists	communist	Anti-capitalist party support promoting destruction of the free market and private property institution
8	Umbrella factor independent	Umbrella	1 – the state was enjoying the ally's umbrella to save budget money for ME 0 no umbrella factor -1 for "umbrella-giver" state
9	local wars & postwar period independent	localwarspostwarperiod	1 if local war lasted during the observation year or if military expenses caused demobilization needs after the World War (I or II)
10	USA dummy	dummy_usa	
		Time series analysis	
1	Human Resources spending as share of total Government spending	hrtotal[24]	Key social (modern welfare state) spending group
2		L. hrtotal	The same, year lag
3	Defense spending as share of total Government spending	defencetotal [25]	
4		L. defencetotal	
5	1964 year Factor	factor	After 1964 a number of laws made effective, institutions became working: • Amendment XXIV (1964) Article XXIV. Proposed 1962; Ratified 1964

[24] Relates to "Mandatory" outlays
[25] Relates to "Discretionary" outlays

					Public sector unions right to bargain collectively (federal, by states) • Carl Hatch Act, 1939 indicates (1938 elections experience) polarization of civil service problem • PSU formation; first strikes (1920) Civil service reform Act (1883)
6	Cold War			1947-1988 years dummy

Democratic Great Powers Panel Data Analysis

Mostly in following two sections we employ AR(1) processes because of usual expectation that polity path dependence is very strong, and lag of dependent variable is good predictor of its current value. In this section we additionally employ panel data analysis to partially address causality questions. Because our dataset covers only 4 countries, and we have no control variables, so our estimations for random or fixed effect model will not be robust, we use pooled regression with errors clustered by country.

Table 4.1. Socialist electoral successes some factors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	socialist	socialist	socialist	socialist	socialist	socialist	socialist
L10.socialist		0.904***	0.856***		0.876***		0.858***
		[0.0648]	[0.124]		[0.0958]		[0.128]
gs	**14.70****		**1.634**			**16.15****	**1.041**
	[4.114]		[1.919]			[2.668]	[2.355]
independentcivil				**13.10**	**1.760**	-2.275	0.964
				[5.761]	[1.919]	[2.624]	[2.173]
Observations	59	51	51	59	51	59	51
Adjusted R-squared	**0.452**	**0.850**	**0.851**	0.234	0.850	0.446	0.848

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Here we are testing whether lag of dependent variable or other explanatory variables explains more variation oa «socialist» variable. Columns 1 and 6 data show that in absence of "L10.socialist" "gs" and "socialist" variables relationship statistically significant. Columns 3, 5, 7 shows, that inclusion of "L10.socialist" make dependence statistically insignificant (i.e. path dependence effect is pretty strong for this case).

Table 4.2. Recount with Dummy on USA

	(1)	(2)	(3)
VARIABLES	socialist (dummy_usa=0)	socialist	socialist

L10.socialist	0.570***	0.570***	0.557***
	[0.114]	[0.108]	[0.133]
gs	**6.813***	**6.813****	**6.180****
	[3.231]	[3.081]	[2.767]
(gs*dummy_usa)		**-6.813****	**-7.768****
		[3.081]	[3.842]
dummy_usa		**-8.306****	**-8.261****
		[2.340]	[2.527]
independentcivilservicepsuorunbr			2.058
			[2.373]
Observations	35	51	51
Adjusted R-squared	0.783	0.882	0.882

Robust standard errors in brackets
*** p<0.10, ** p<0.15, * p<0.20

So we tried to take into account USA political history peculiarity caused by pretty low demand for redistribution and social engineering in this country (comparing with Europe).

For the "socialist" – "gs" case USA this historical peculiarity means inclusion of leftists' groups in the broad "progressive" or "liberal" coalition so respective values for "socialist" variable permanently equal 0.

Note that significance levels are different here from other tables, because improvement of explanatory power of specifications (see adj. R-squared in columns 2-3) and high estimated values of coefficients before *gs, dummy_usa and (gs*dummy_usa)* variables overcome small statistical significance. We can partially describe such decision by obvious existence of omitted variable bias in our specifications (there are a lot of missing controls).

Column 1 of Table estimation's outcome shows that without USA "gs" variable could be tried for "socialist" variable explanation. Columns 2 and 3 regressions including both "L10.socialist" and dummy_usa show us expected positive influence of General Suffrage on Socialists' electoral successes.

Their success in the budget priorities changes in the civilized countries could be illustrated by the following diagram:

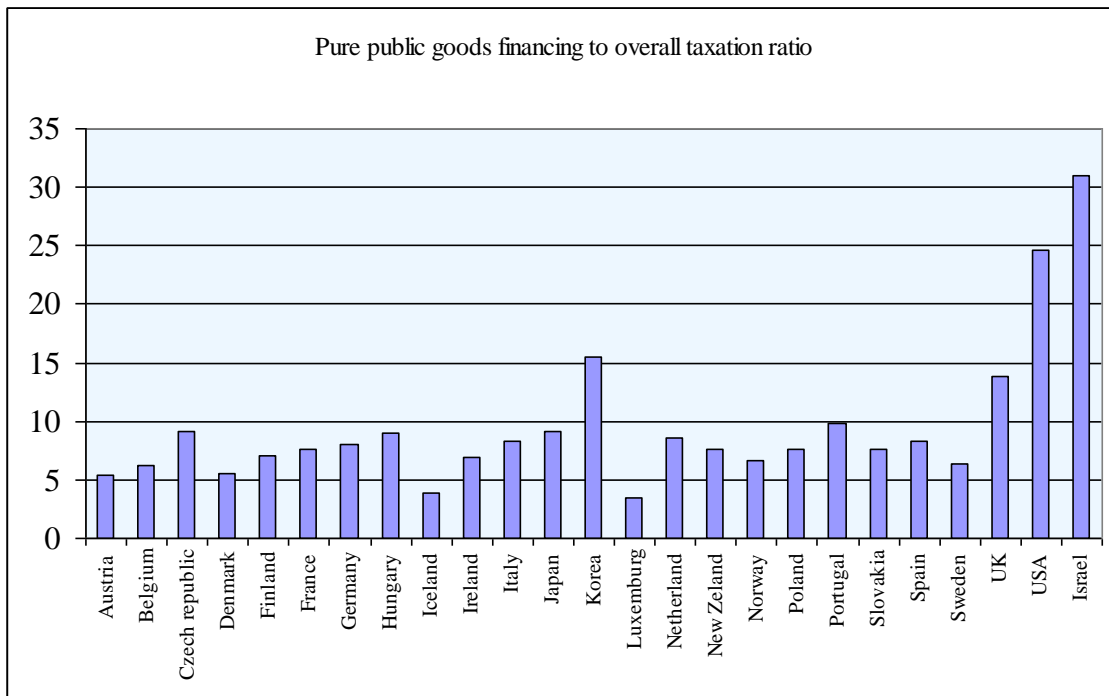**Pure public goods financing to overall taxation ratio**

Diagram 1. Pure public goods financing to overall taxation ratio
Sources: OECD in Figures 2007 - OECD © 2007 - ISBN 9789264034549; Bank of Israel (http://www.bankisrael.gov.il/deptdata/mehkar/indic/eng_f01.htm on tax revenue; state's budget expenditures information for 2011-2012 http://www.mof.gov.il/BudgetSite/StateBudget/Budget2011_2012/Lists/20112012/Attachments/1/Budget2011_2012.pdf)

Table 5. Step 2 of Panel data analysis

VARIABLES	(1) Me_totg ov	(2) Me_totg ov	(3) Me_totg ov	(4) Me_totg ov	(5) Me_totg ov	(6) Me_totg ov	(7) Me_totg ov	(8) Me_totg ov	(9) socialist
L10.megovernmentexpenses				0.525***	0.691***	0.564***	0.529***	0.537***	
				[0.0618]	[0.0419]	[0.0441]	[0.0748]	[0.0550]	
socialist	**-0.552****			**-0.374****			**-0.386****	**-0.399*****	
	[0.101]			[0.0703]			[0.0772]	[0.0640]	
localwarspostwarperiod		6.555			10.02			9.492	
		[8.566]			[10.99]			[9.740]	
umbrella			**-11.91*****			**-6.447*****	0.456	1.210	19.24***
			[1.323]			[0.330]	[1.431]	[1.542]	[3.229]
Observations	59	59	59	51	51	51	51	51	59
Number of clusters	4	4	4	4	4	4	4	4	4
Adjusted R-squared	0.315	-0.002	0.219	0.598	0.501	0.522	0.589	0.615	0.558

Standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

The table's nine columns represents nine regressions (pooled regression with errors clustered by countries).

*** - 1% significance level, ** - 5% significance level; * - 10% significance level.

L10.megovernmentexpense inclusion in the statistical analysis increases outcomes (columns 4-6) more robust. We   could see as (10) lag of dependent variable partly steals the socialist and umbrella factors.

Adjusted R-squared in the columns 1 and 3 show that adding of both factor of military (not only nuclear) "umbrella" and leftists parties electoral support helps to improve explanatory power of regressions on military spending (expenditures – ME, (both factors caused decrease in military

spending share).

Columns 7 and 8 show the socialist responsible for greater component of ME variations' explanation (i.e. socialist relative effect higher than umbrella effect).

Column 9 shows that socialist and umbrella factor variables correlates significantly, so they shouldn't be used in the same regression.

Moreover, estimated coefficients before socialist variable (columns 4, 7, 8) accounts for our hypothesis about relationship between *socialist* variable and *me_totgov*, because it's stable among different regression specifications.

Inter-bureaucratic competition in the USA: Statistical analysis
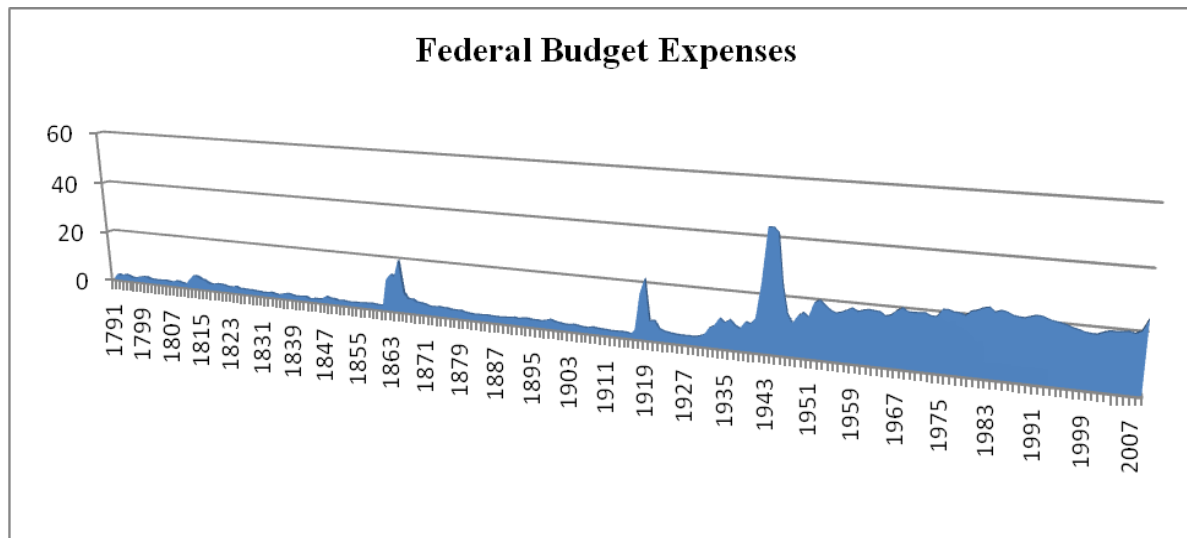

Diagram 2. USA Federal Budget spending, as a share of GDP (%) Sources: Mitchell, 2006; US Budget historical tables
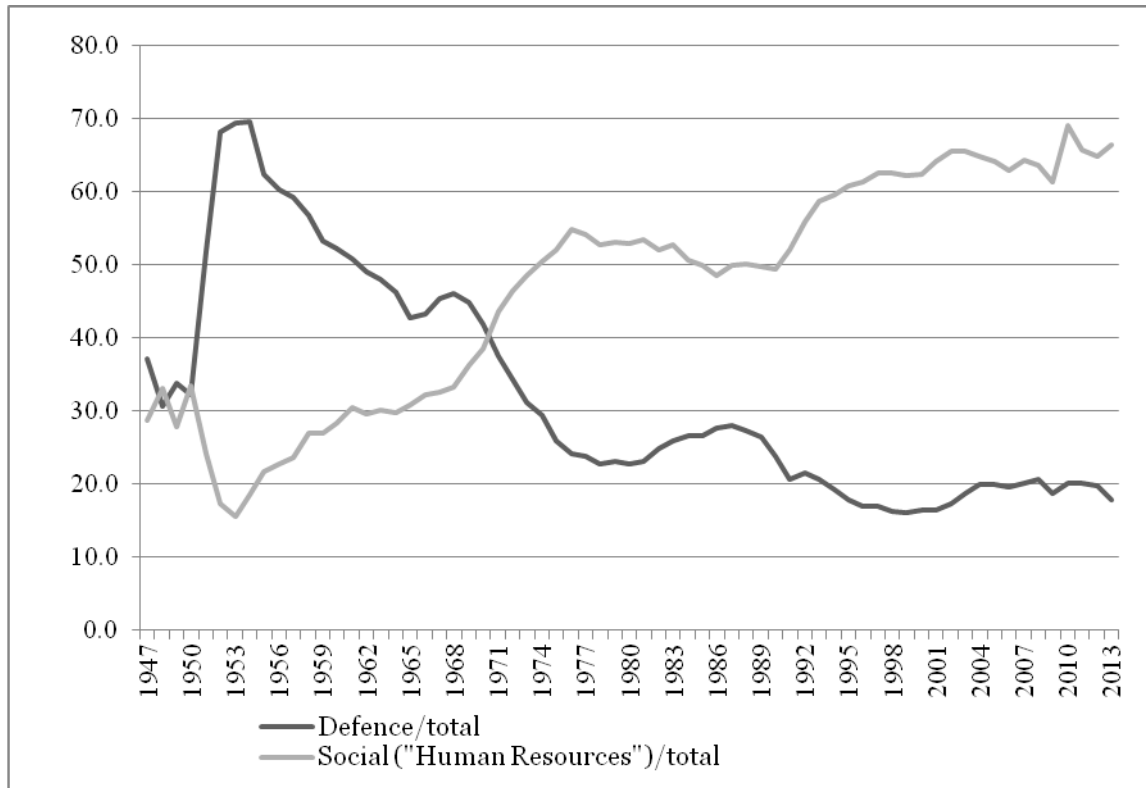
Diagram 3. USA Federal Budgets' principal components' shares historical trends ("discretional outlays" – defense – to total spending, % and "Mandatory outlays" – Human Resources - to total spending, %). Source: US 2012 Federal Budget historical tables http://www.whitehouse.gov/omb/budget/Historicals

USA

Table 6. US budget HR spending share determinants: Time Series analysis

	(1)	(2)	(3)	(4)
VARIABLES	**hrtotal**	**hrtotal**	**hrtotal**	**hrtotal**

L.hrtotal		0.988***	0.925***	0.928***
		[0.0223]	[0.0272]	[0.0240]
factor	**28.21***		**2.758****	**2.537****
	[1.881]		[1.350]	[1.240]
localwar				-0.914
				[0.725]
Observations	67	66	66	66
Adjusted R-squared	**0.661**	**0.971**	**0.973**	0.974

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 7. US Defense spending share: Time Series analysis

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	defencetotal	defencetotal	defencetotal	defencetotal	defencetotal	defencetotal
L.defencetotal	0.978***			0.955***	0.805***	0.796***
	[0.0303]			[0.0404]	[0.0560]	[0.0527]
factor		-28.79***			-6.009***	-5.342***
		[2.647]			[1.689]	[1.602]
cold_war			20.96***	1.119	1.993	2.673**
			[3.015]	[1.283]	[1.201]	[1.151]
localwar						2.616***
						[0.874]
Observations	64	65	65	64	64	64
Adjusted R-squared	0.943	0.647	0.425	0.943	0.952	0.958

Standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

We omitted from the US budget and political history analysis data before 1947 because of poor compatibility of two periods (before WWII and

after it). Before WWII USA position in the world politics stays predominantly neutral. So US military expenses jumped for the Civil War and WWI only). Since WWII USA became umbrella – giver for the vast population besides own taxpayers. The latter factor caused significant "shift up" of the US military spending. So dummy_usa could help us to explain the military spending through the panel data much better.

Here we are analyzing dependence of hrtotal on L.hrtotal (hrtotal, 1 year lagged) to test its' endowment in the dependent variables' variation explanation. The outcomes show the "factor" influences hrtotal positively and significantly (at the same time 1-st lag of hrtotal is the principal explanatory). Column 4 presents outcomes of regression including localwar dummy variable. These regression shows, the 1964 factor is still significant in hrtotal explanation, so factor has own endowment in hrtotal.

The Table 7 shows, defencetotal is depended significantly and negatively on the factor, but the dependence significance disappears under l.defencetotal (defencetotal, 1 year lagged) inclusion in the regression. The columns 4-6 show the same outcome under inclusion localwar, cold_war dummy variables into regression analysis. At the same time these dummies is proven to be significant in the defencetotal variation explanation. "1964 factor" significant in defencetotal explanation, so factor has own endowment in defencetotal.

As Medicare disbursements starts in 1966, "1964 factor" variable looks as "drawing circles around the shot".

To defend our specification of statistical analysis let take in consideration the fact, the large scale non-military (not for security, law and order, not for the pure public goods) spending programs realized many times a long before the mid-1960-ties.

The key difference of previous attempts to increase spending for mixed public goods (for example, Panama Channel building[26];   F-D Roosevelt administration's public works[27]) and Great Society programs is special interest groups and leftist politicians' great achievement: the spending long term stabilization on and above the start level. They succeeded to make "social" spending not just huge, but permanently growing and to defend this trend from the revision attempts. They succeeded to defend social expenditures both legally "as mandatory spending", until the US Congress could cancel this "mandates" and politically, creating incentives encouraging big and growing bunch of people to become interested in to join coalition supporting these programs. So, we believe, there is substantial connection between the above

[26] See Fitzgerald, 1915
[27] Fitch, 1953

mentioned parameter ("1964") and breaking tradition of "representation through taxation" in 1964, Public service consistently reproducible "left-wing" politicization (see Diagram 4) etc.
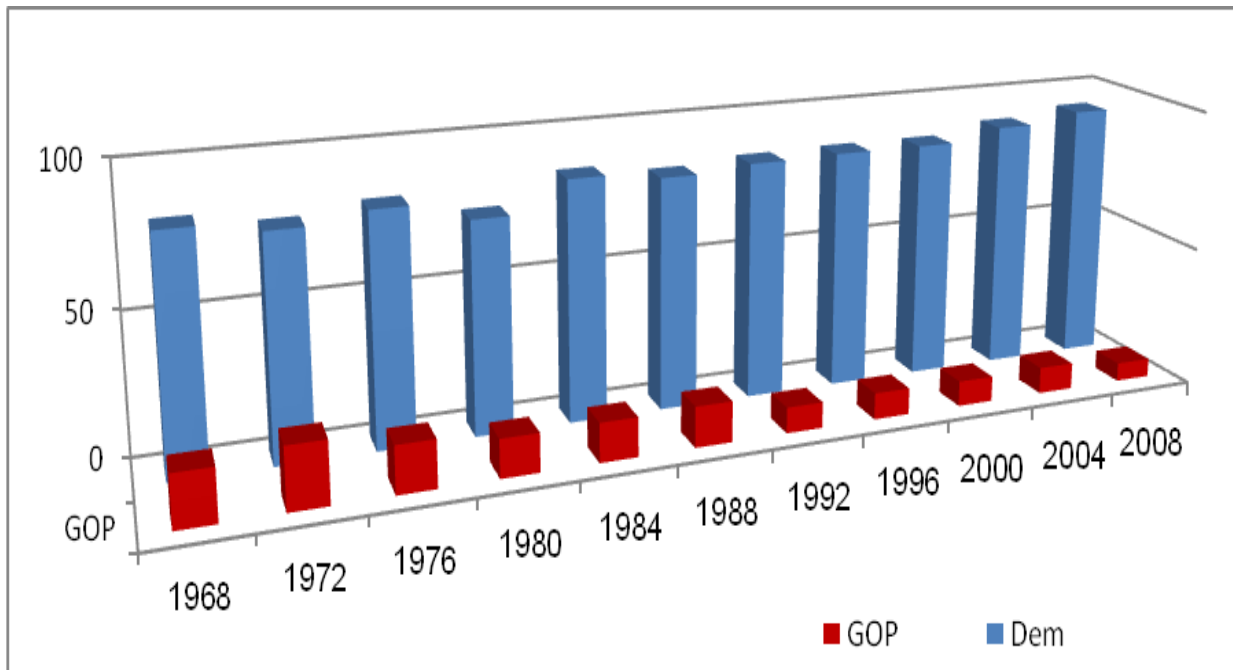

Diagram 4. Presidential elections statistics for Federal District Columbia. Source: Official vote counts for federal elections from the official sources compiled by the Office of the Clerk US House of Representatives. http://clerk.house.gov
(http://clerk.house.gov/member_info/electionInfo/index.aspx)

Relative share of public spending for defense fall reflects outcomes of inter-bureaucratic competition caused and supported:

- Undervaluation of the defense (pure public good) significance for the nation;
- reshaping of military justice, deviating very far from the Geneva convention standard (see Annex 2);
- undermining of the military service prestige among educated men ("expressive behavior" – see Hillman, 2010; his interpretation of prestige driven behavior includes leftist ideological indoctrination as exogenous, as a kind of supernatural phenomena);
- restrictions on financing (discretionary outlays for defense vs. mandatory outlays for Social (HR) needs);
- Scale of financing for military needs as for the secondary importance goods provision;
- Strategy choice obvious failure.

Conclusions

I. Concessions, gestures of good will on the part of a democratic society, are seen as signs of weakness by totalitarian societies and lead only to an escalation of terror and aggression. A steadfast and determined stance – including the willingness and ability to suffer heavy losses, in both human and economic terms – is the price democratic societies must be willing to pay in order to effectively battle aggression on all levels. In the article, we considered two technical issues which are crucial for the security of a democratic society in a multi-polar nuclear world:

1) Targeting doctrine – targeting primarily rogue state infrastructure, rather than its military objects or population centers.

2) Implementing a nation-wide but decentralized civil defense policy, based on dual-use installations.

Finally, *"the best way to win a war is to prevent it from occurring. This objective is well served by insuring the strength and the security of [our society. Our society] was founded and has since lived upon principles of tolerance, freedom, and good will at home and abroad. Strength based on these principles is no threat to world peace. Prevention of war will not come from neglect of strength or lack of foresight or alertness on our part. Those who contemplate evil and aggression find encouragement in such neglect."*[28]

II. Section I's Conclusions looks trivial or at least broadly famous and well proven. The fact the strategy chosen by Rule of Law Democracies is so drastically deviates from the optimal ought to be explained.

Our hypothesis is: a State fails to provide mixed public goods and pure public goods simultaneously without failure in the security and defense quality. It looks like to achieve the both objectives simultaneously are pretty hard because of the tasks poor compatibility. Significant budget share of non-military spending empowers special interests' groups and causes these groups expansion inescapable trap.

Competition for the budget share reasoning and military bureaucrats' natural risk aversion leads to arising of the institutional obstacles preventing efficient military leadership and optimal decision making process.

Brief and preliminary statistical analysis fails to reject this hypothesis (formulated in terms of budget spending history as above mentioned:

---

[28] *United States Strategic Bombing Survey Summary Report (European War)*, p. 32

General Suffrage and Independent Civil service institution could cause or even create public (electoral) demand for Welfare State. The left wing populist parties arising and strengthening could be interpreted as this demand manifestation.

Welfare state cause both sharp increase share of public spending for mixed public goods provision making this functions of the state dominant and relative share of public spending for defense fall (even if absolute value of ME remains stable); so the latter functions became secondary.

Bibliography

1. A Brief Description of the Radiation Effects Research Foundation Letterpress Co., Ltd. September 2008. Available on WWW: *http://www.rerf.jp/shared/briefdescript/briefdescript.pdf*

2. *Acemoglu D., Robinson J.A.* Economic Origins of Dictatorship and Democracy. Cambridge University Press, 2006.

3. Aidt T.S. et al. Democracy comes to Europe: Franchise extension and fiscal outcomes 1830–1938 // European Economic Review. 2006. Vol. 50. N 2.

4. AUMANN, Israel (Robert), 2006 Herzliya Conference, Opening Ceremony. Herzliya, Israel, 2006. Available on WWW: *http://www.herzliyaconference.org/eng/?ArticleID=1394&CategoryID=215*

5. Borge Lars-Erik, Rattsø Jørn "Income distribution and tax structure: Empirical test of the Meltzer–Richard hypothesis" European Economic Review Volume 48, Issue 4, August 2004, Pages 805-826

6. Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts and Recommendations to the Governments of Belarus, the Russian Federation and Ukraine. International Atomic Energy Agency, Vienna, April 2006 IAEA/PI/A.87 Rev.2 / 06-09181. Available on WWW: *http://www.iaea.org/Publications/Booklets/Chernobyl/chernobyl.pdf*

7. CORDESMAN, Anthony et al, *Iran, Israel, and Nuclear War*, Center for Strategic and International Studies, Washington D.C. Nov 19, 2007. Available on WWW: *http://csis.org/files/media/csis/pubs/071119_iran.is&nuclearwar.pdf*

8. CUTTLER, Jerry M. and POLLYCOVE, Myron, Nuclear Energy and Health: and the Benefits of Low-Dose Radiation Hormesis *Dose-Response* 7, 2009.

9. Department of Defense USA Defense strategy Guidance "Sustaining US Global Leadership: Priorities for 21th century Defense" January 2012 http://www.defense.gov/news/Defense_Strategic_Guidance.pdf

10. Fitch Lyle C. "Trends in Federal, State, and Local Government Expenditures Since 1890" The American Economic Review, Vol. 43, No. 2, Papers and Proceedings of the Sixty-fifth Annual Meeting of the American Economic Association (May, 1953), pp. 216-233

11. Fitzgerald John J. "Financial Problems for Congress" // The North American Review, Vol. 202, No. 721 (Dec., 1915), pp. 824-834

12. FOSTER, John S. Jr. et al. *Report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack, Vol. 1: Executive report*, 2004. Available on WWW: *http://www.empcommission.org/docs/empc_exec_rpt.pdf*

13. GLASSTONE, Samuel and DOLAN, Philip J., *The Effects of Nuclear Weapons*, United States Dept. of Defense, 1977.

14. HARNEY, Robert C. *The Enemy's Access Denial System: Potential Competitor Exploitation of U. S. Military Vulnerabilities*, 7 Dec 2000, Naval Postgraduate School, Monterey CA 93943-5000, Report # NPS-JW-01-014.

15. Israeli protective building standards (in Hebrew). Available on WWW: *http://www.architecture.org.il/info_hokim_haga.php*

16. Hillman, A.L., Expressive behavior in economics and politics, European Journal of Political Economy (2010), doi:10.1016/j.ejpoleco.2010.06.004

17. Lee Steven "Morality, the SDI and limited nuclear war" //Philosophy & Public Affairs, Vol. 17, No. 1 (Winter, 1988), pp. 15-43

18. KAHN, Herman, *On Thermonuclear War*, Princeton University Press 1960.

KAHN, Herman, *The Nature and Feasibility of War and Deterrence*, RAND Corporation Paper P-1888-RC, Santa Monica CA, 1960. Available on WWW: *http://www.rand.org/pubs/papers/P1888.html*

20. *Meltzer A. and Richard S.*, A rational theory of the size of government. Journal of Political Economy, 89 (1981), pp. 914–927

21. *Niskanen W.* Bureaucracy and Representative Government. Chicago: Aldine-Altherton, 1971.

22. NUDELMAN, Raphael, Interview with Martin van Creveld. *Nota Bene*, **7** (2005). Available (Russian translation) on WWW: *http://gazeta.rjews.net/nudel.shtml*

23. PIPES, Richard, *Vixi: Memoirs of a Non-Belonger*, Yale University Press, New Haven and London, 2003.

24. *Radiation Risk at Perspective*. Position statement of the Health Physics Society PS010-1, revised Aug. 2004. Available on WWW: *http://hps.org/documents/risk_ps010-1.pdf*

25. *Health Effects of Low-Level Radiation* Position statement 41, American Nuclear Society, June 2001. Available on WWW: *http://www.ans.org/pi/ps/docs/ps41.pdf*

26. SHARON, Moshe, To Clean Out the Stables and Prepare for War, *Nativ*, 9, 2006. Available on WWW: *http://www.acpr.org.il/ENGLISH-NATIV/09-issue/sharon-9.htm*

27. SAUTTER, John A., Variance, Violence, and Democracy: A Basic Microeconomic Model of Terrorism*, Journal of Strategic Security*, v. III num. 1 March 2010. Available on WWW: *http://www.henley-putnam.edu/652-267.htm#toc*

28. Simon Wiesenthal Website [online] *http://www.wiesenthal.com*

29. SOCOL, Yehoshua and YANOVSKIY, Moshe, Nuclear Proliferation and Democracy, *American Thinker* Jan 02, 2011. Available on WWW: *http://www.americanthinker.com/2011/01/nuclear_proliferation_and_demo.html*

30. *The Effects of Nuclear War.* Office of Technology Assessment, Congress of the United States, Government Printing Office, Washington, D. C., 1979. Available on WWW: *http://www.fas.org/nuke/intro/nuke/7906*

31. *The Number of Atomic Bombs Equivalent to the Last War Air Attacks on Great Britain and Germany*. Office of the Chief Scientific Adviser, UK Home Office CD/SA.16 1950.

32. United States Strategic Bombing Survey Summary Report (European War) Washington D.C., 15 Sep 1945. Available on WWW: *http://www.anesi.com/ussbs02.htm#c*

33. United States Strategic Bombing Survey Summary Report (Pacific War) Washington D.C., 1 July 1946. Available at: *http://www.anesi.com/ussbs01.htm#recommen*

34. Voegeli W "Never Enough" Encounter Books, NY, 2010

35. CBO Staff Memorandum "Mandatory spending: Trends and sources of Growth" July 1992 http://www.cbo.gov/ftpdocs/75xx/doc7518/92doc107.pdf

36. Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War. Geneva, 12 August 1949 http://www.icrc.org/eng/war-and-law/treaties-customary-law/geneva-conventions/index.jsp

Annex 1. Some facts about nuclear warfare

At the outset, a clarification is called for. There is no doubt that nuclear terror or nuclear warfare, even of limited scale, will be calamitous. Strategically speaking, however, the direct consequences of the limited use of nuclear weapons, especially low-yield devices most likely to be in the hands of non-state actors or irresponsible governments, would probably not be great enough to bring about significant geo-political upheavals. Casualties from a single 20-KT nuclear device are estimated at about 25,000 fatalities with a similar number of injured, assuming rather unfortunate scenario (the center of a large city, with minimal warning)[29]. Scaling the above toll to larger devices or to a larger number of devices is less than linear. For example: it has been estimated that it would take as many as 80 devices of 20-KT yield each to cause 300,000 civilian fatalities in German cities (a result actually achieved by Allied area attacks, or carpet bombings, during the Second World War). A single 1-MT device used against Detroit has been estimated to result in about 220,000 fatalities[30]. For cities built on hilly terrain, like Los Angeles or San Francisco, the death toll is anticipated to be considerably smaller, probably by a factor of two. More importantly, it is anticipated that well-prepared civil defense measures based on rather simple presently known techniques, would decrease these numbers by at least by an order of magnitude (as will be discussed later). There is little doubt that a nation determined to survive and with a strong sense of its own destiny would not succumb to such losses.

The albeit technical but extremely relevant question of the consequences of nuclear radiation must be addressed in this context. It is often argued that the fallout effects of even the limited use of nuclear weapons would be world-wide and would last for generations. This is an exaggeration. The certain deterministic consequences of exposure to high doses of nuclear radiation – radiation injuries – are very real and well-established, but limited to a relatively small area (at most several tens of square kms. for a 20-KT weapon). Estimations show that the casualties' toll from the fallout is within the anyhow large uncertainty of the overall toll. The extent of highly dreaded cancers and mutations ("stochastic" effects) as a result of exposure to low doses of radiation is debatable. Present predictions are usually based on the so-called linear no-threshold (LNT) model. While most people still believe in LNT, the fact remains that this

---

[29] *The Number of Atomic Bombs Equivalent to the Last War Air Attacks on Great Britain and Germany.*
[30] *The Effects of Nuclear War,* p. 37

model is not backed by solid science or by expert consensus[31]. Both the US Health Physics Society and the American Nuclear Society claim that LNT cannot be used for quantitatively estimating damage from radiation below some reasonable threshold[32]. The following facts speak for themselves:

– in Japan, less than 1,000 excess cancer cases (i.e. above the natural occurrence) were recorded in over 100,000 survivors over the past 60 years – compared with about 110,000 immediate fatalities in the two atomic bombings. No clinical or even sub-clinical effects were discovered in the survivors' offspring[33];

– In the Chernobyl area, only 15 cancer deaths (while LNT predicted above 4,000) can be directly attributed to fallout radiation. No radiation-related increase in congenital formations was recorded[34].

Moreover, emerging (though not yet conclusive) scientific evidence suggests that low doses of nuclear radiation are beneficial to human health ("radiation hormesis")[35], just as ultraviolet radiation (also a form of ionizing radiation) is clearly beneficial in low doses (sun tanning) while high doses are certainly harmful (sunburns and skin cancer).

Annex 2. Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War. Geneva, 12 August 1949
Selected articles[36]

Art. 5 Where in the territory of a Party to the conflict, the latter is satisfied that an individual *protected person is definitely suspected of or engaged in activities hostile to the security of the State, such individual person shall not be entitled to claim such rights and privileges under the present Convention as would, if exercised in the favour of such individual person, be prejudicial to the security of such State. (Author's accentuation)*
Where in occupied territory an individual protected person is detained as a spy or saboteur, or as a person under definite suspicion of activity hostile to the security of the Occupying Power, such person shall, in those cases where absolute military security so requires, be regarded as having forfeited rights of communication under the present Convention.
In each case, such persons shall nevertheless be treated with humanity and, in case of trial, shall not be deprived of the rights of fair and regular trial prescribed by the present Convention.

---

[31] *The Effects of Nuclear War*, p. 111
[32] *Radiation Risk at Perspective*.
[33] *A Brief Description of the Radiation Effects Research Foundation*
[34] *Chernobyl's Legacy: Health, Environmental and Socio-Economic Impacts and Recommendations to the Governments of Belarus, the Russian Federation and Ukraine*.
[35] CUTTLER, Jerry M and POLLYCOVE, Myron, *Nuclear Energy and Health: and the Benefits of Low-Dose Radiation Hormesis*.
[36] With authors' made accentuations

They shall also be granted the full rights and privileges of a protected person under the present Convention at the earliest date consistent with the security of the State or Occupying Power, as the case may be.

Authors' Comment: Thus, occupying Power is not obliged to take a risks of its' soldiers lives "in Time of War" like in US vs. Wuterich. US Army oughtn't take a regular armed conflict as hostages liberation operation;

Art. 27. Protected persons are entitled, in all circumstances, to respect for their persons, their honour, their family rights, their religious convictions and practices, and their manners and customs. They shall at all times be humanely treated, and shall be protected especially against all acts of violence or threats thereof and against insults and public curiosity.

Women shall be especially protected against any attack on their honour, in particular against rape, enforced prostitution, or any form of indecent assault.

Without prejudice to the provisions relating to their state of health, age and sex, all protected persons shall be treated with the same consideration by the Party to the conflict in whose power they are, without any adverse distinction based, in particular, on race, religion or political opinion.

However, the Parties to the conflict may take such measures of control and security in regard to protected persons as may be necessary as a result of the war. (Author's accentuation)

Art. 28. **The presence of a protected person may not be used to render certain points or areas immune from military operations.**

Authors' Comment: Civilians' location in the houses occupied by attacked militants is not the reason to break attack or to send soldiers to attack without due fire protection.

Art. 29. The **Party to the conflict in whose hands protected persons may be, is responsible for the treatment accorded to them by its agents, irrespective of any individual responsibility which may be incurred.**