

1. Introduction

1.1. RESEARCH INTEREST

Today western countries fear international terrorism and Islamic fundamentalism. As Richard Clarke made clear after 9/11, the international terror network of jihadists will be the biggest danger to the US national security in the near future and will probably also need to be combated in the following generation (Clarke 2005: 11). In addition to western nation-states, the United Nations Security Council also declared terrorism a major threat to international security. After 9/11 the following Security Council Resolution was penned on September 28 2001: “[...] the Security Council [is] deeply concerned by the increase, in various regions of the world, of acts of terrorism motivated by intolerance or extremism” (UNO 2001: 1). Whereas western governments have subsequently used the (legitimate) grounds of state security to justify their ‘War on Terror’, they have at the same time, “persuaded their citizens to accept less progressive and rigorous norms, easing the job of law enforcement at the cost of individual human rights” (Kamalova 2007: 1). This is even truer for Central Asian governments who are used to governing in an environment where respect for human rights does not yet have such a long political tradition as in Europe and the US. I concentrate here on the comparison of the former Soviet Republics of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. (As Turkmenistan is a too special case because the repression and state-control are very extreme and the country is totally closed to any international observers and scientific research, this case is excluded from the study.) Despite criticism from human rights organizations, western powers like the US, France and Germany as well as western collective treaty organizations such as NATO collaborate – along with Russia and SCO – with these authoritarian Central Asian re-

gimes to 'fight terrorism'. These human rights organizations state that the international discourse on Islamic terrorism justifies human rights violations and the suppression of the already very weak opposition in the Central Asian countries. Indeed, Khalid explains that by taking part in the 'War on Terror' Central Asian countries can expand their power "by tying all domestic opposition to 'international terrorism', even when no links actually exist" (Khalid 2007: 169). Kamalova exemplifies this with the case of Uzbekistan which went furthest in this regard (Kamalova 2007).

The Central Asian countries differ in terms of the strength of their political regimes; the extent to which their security forces use repressive means, and also in terms of their respective cultures and level of religiosity. However, despite these differences, my case study shows that at least with regards to the development of the religious reality and the handling of religious groups all Central Asian states share some common features.

Social developments:

- A 'revival of Islam' is underway in Central Asia. This 'revival of Islam' is ideologically multi-faceted: not only are neo-fundamentalist movements becoming more popular but modernist Islamic groups are also gaining more members. In addition, folk Islam is being practiced on a more regular basis.
- On the one hand there are devout religious Muslims without any social or political agenda while on the other there are armed Islamic groups aiming to establish an Islamic state.
- Among those who are working towards an Islamic society are groups which proselytize peacefully and others who execute terrorist acts which lead to deaths and casualties.

Government response:

- The Central Asian governments have established their own interpretation of 'traditional Islam' as the legal, 'official' Islam.
- Central Asian governments lump together all foreign Islamic movements as 'extremist' and 'terrorist'.
- The Central Asian governments restrict the freedom of religion of their citizens by counter-terrorism measures.

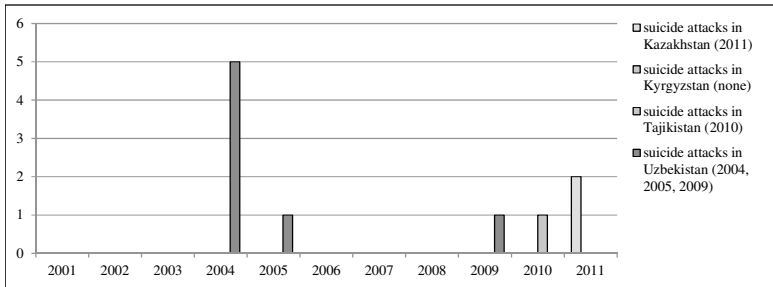
1.1.1. Research Question

Comparing the extreme examples concerning the threat of Islamist terrorism I can observe the following differences between the Central Asian states:

- Since the early 2000s seven suicide attacks have taken place in Uzbekistan (see Figure 1). Furthermore, this country has the highest numbers of detainees on religious grounds: the total figure is estimated to be several thousands (see Table 21). According to the Human Rights Defenders of Uzbekistan in 2012 alone 250 Muslims were detained on religious grounds (see US State Department 2013).
- In Kyrgyzstan no terrorist attacks have occurred so far although it is the country with the highest percentage of Muslims (10% of the population) that regard attacks against civilians as at least sometimes justified (see Figure 7) in order to defend Islam (Uzbekistan is the country with the lowest percentage of 0%). Furthermore, an astonishingly high percentage of over 30% of Kyrgyzstanis would welcome the introduction of Sharia as the law of the land (see Figure 7 as well; there is no data available on this question for Uzbekistan). Despite these facts, it is the Central Asian country with the smallest numbers of detainees on religious grounds (approximately 50 people).

Another difference between the two countries is that Uzbekistan has the largest proportion of Muslims that do not feel free to practice religion while Kyrgyzstan is the Central Asian country where Muslims feel most free to practice their religion (see Figure 12).

Figure 1: Numbers of Suicide Attacks in Central Asia



Source: GTD (2013)

It is furthermore interesting to note that in each country where suicide attacks occurred this invariably happened after the introduction of a restrictive religious law: such a law was introduced in Uzbekistan in 1998, in Tajikistan in 2009 and in Kazakhstan in 2011. (In Kyrgyzstan a new religious law was introduced in 2009 and amended in 2012.)

Against this background I pose the following research questions:

- Why does the revival of Islam lead to different degrees of radicalization of Muslims in Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan?
- Does a vicious circle between counter-terrorism measures and radicalization of Muslims exist in Central Asia? Why could this be the case?

I will now introduce some important terms and then elaborate on the concepts of repression and radicalization before turning to the broader theoretical background of radical Islam and security issues.

1.1.2. Definitions

Before I start to theorize about this topic I must clarify some terms.

- *State actors*: if I speak of a state actor I have the Central Asian governments as well as their ministries, institutions and security forces in mind. The term state actor refers to the collective of individuals working in these state institutions.
- *Non-state actors*: if I speak of non-state actors I am referring to Muslim groups which either have or do not have a political agenda but share the same goals or sentiments of Islam. The term non-state actor refers to the collective group and not to an individual member of the group.
- *State violence/ Repression*: the terms state violence and repression are used interchangeably and refer to “the action [of a state actor] of subduing someone or something by force” (Oxford dictionary). When I speak of state-violence of repression without further specification I refer to violence aimed at members of Islamic groups. Repressive means used by a state can be legitimate or illegitimate as well as legal or illegal. Whereas the legality of repressive means depends on the state’s laws, the legitimacy of repressive means is not only a question of laws and rules but also of the “ability to be defended with logic or justification; validity” (Oxford dictionary) (see definition of legitimacy).
- *Radicalization*: I distinguish between ideological and methodological radicalization. A person who is ideologically radicalized becomes an advocate of “thorough or complete political or social reform; a member of a political party or part of a party pursuing such aims” (Oxford dictionary). A person who is methodologically radicalized becomes militant, which means that he favours “confrontational or violent methods in support of a political or social cause” (Oxford dictionary).
- *Non-state violence/ Militancy*: the terms non-state violence and militancy are used interchangeably and refer to violent means used by non-state actors. When I speak of non-state violence or militancy I mean property damage or harm caused to people by citizens belonging to an Islamic group. Non-state violence can have a terrorist character if it is directed against civilians or a guerrilla-like character if it is directed against security forces, police or the government. It is always illegal but

can be regarded as legitimate or illegitimate (see definition of legitimacy).

- *Legitimacy*: legitimacy is important in my study in two different ways. First, there is the question of whether state and non-state violence is legitimate in a normative way. The use of repressive means by a state or militant means by a non-state actor is legitimate if it is morally or religiously justifiable. (The Stanford Encyclopedia of Philosophy calls this a narrow normative definition of legitimacy.)

The second issue concerns the fundamental question of the legitimacy of the Central Asian states and governments. In this regard Weber's distinction of three different sources of legitimacy for rule is important for what the Stanford Encyclopedia of Philosophy calls the "descriptive definition of legitimacy". Crucial in this respect is the citizen's belief in the legitimacy of a political regime: "the basis of every system of authority, and correspondingly of every kind of willingness to obey, is a belief, a belief by virtue of which persons exercising authority are lent prestige" (Weber 1964: 382). In the Central Asian context Weber's different (rational-legal, traditional and charismatic) sources of legitimacy for a government or ruler can be understood as: the ability to maintain political stability, provide economic development or mere habituation to clan politics or Soviet style of rule (I will go into further details of such consideration in section 6.3.1).

- *Security*: traditional concepts of security refer to national security, which means the absence of military threats from inside and outside of a country. Whereas this puts the sovereign nation state at the heart of security policies, the term human security refers to the security of the individual. This definition is relevant as "far more people have been killed by their own governments than by foreign armies during the last 100 years" (HSRP). At any rate, there is a degree of correlation between issues of national and human security. The Human Security Report Project (HSRP) defines human security as "the combination of threats associated with war, genocide, and the displacement of populations" which means "at a minimum, [...] freedom from violence and from the fear of violence" (HSRP). In a broader sense, "hunger, disease, pollution, affronts to human dignity, threats to livelihoods, and other harms" are also regarded as human security issues (HSRP). Under this broad

definition the protection and provision of social and economic human rights is essential.

I will come back to these concepts of security when discussing the results of the simulation. I will now analyze in detail the arguments of those who criticize the collaboration of western powers with authoritarian Central Asian regimes because of the latter's response to the 'revival of Islam' and thereby elaborate my hypothesis.

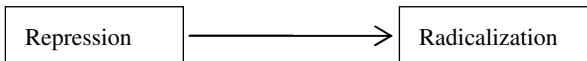
1.1.3. Repression-Radicalization Hypothesis

When arguing that western powers should not collaborate with authoritarian regimes who spurn basic human rights, human rights defenders and also scientists often refer to what I will call here the repression-radicalization hypothesis. This hypothesis implies that individuals who experience the suppression of their human right to freedom of religion are radicalized. Not only practitioners and field workers but also independent observers mention this hypothesis and I therefore scrutinize its implications in more detail in this study.

Repression-radicalization hypothesis:

In the long run, strong state repression against Islamic groups leads to the radicalization of Muslims in Central Asia.

Figure 2: Repression-radicalization Hypothesis



Expert interviews in the region revealed that it is more realistic to act on the assumption of the radicalization of individuals rather than on the assumption of the radicalization of entire groups (interview with member of Politico-Military Unit OSCE in Bishkek). Let us elaborate on the aforementioned mechanism with some examples of statements. First of all, the presentation of religious or political issues as a security problem by governments indi-

cates that the state fears devout Muslims because of their social influence. As I can see from the following examples, many observers concentrate on the case of Hizb ut-Tharir. This group is discussed especially controversially as it is a political party that aims at establishing a caliphate across the contemporary nation-states but despite using only non-violent means it is illegal in all Central Asian countries (see also Karagiannis 2010: 72).

Indiscriminate repression of devout Muslims begs the question: how many alleged extremists are merely devout peaceful Muslims rather than terrorists? How many of them feel aggrieved because of the human rights violations they experience and subsequently become extremists only after being arbitrarily detained? The following statement by Halbach exemplifies this view with reference to Uzbekistan:

“For a long time now, the undifferentiated approach taken towards alleged or actual religious extremists in Uzbekistan has led us to question whether power, with its violent actions, actually fosters radicalization tendencies instead of preventing them” (Halbach 2010a: 95, translated by the author).

Halbach’s comments are echoed by Karagiannis, who observes that repressive means against fundamentalist movements can have a counter-intended effect. He gives the example of the non-violent group Hizb ut-Tahrir, which has only attracted greater publicity as a result of its criminalization:¹

“[...] the adoption of repressive and punitive measures to combat a radical, but non-violent, Islamic group has only increased the appeal of Hizb ut-Tahrir among Central Asian populations” (Karagiannis 2010: 72).

By detaining members of banned groups, the government tries to suppress the group, but this does not always have the desired effect. Kamuluddin’s argument is in a similar vein. He explains the counter-intended effect of developing martyrs’ stories by means of detentions:

1 *Criminalize* means: “turn (an activity) into a criminal offence by making it illegal: turn (someone) into a criminal by making their activities illegal” (Oxford dictionary: <http://www.oxforddictionaries.com/definition/english/criminalize>).

“by imprisoning and persecuting the members of the party, the authorities are, in effect, providing substantial assistance to the Hizb ut-Tahrir, which, as a result, enjoys the aura of martyrdom” (Kamuluddin 2005).

My case studies show that the registration of religious groups is one of the main instruments for controlling the religious landscape in the Central Asian countries. This allows for the criminalization of groups which do not pass the registration process and therefore are per se illegal. Members do not even have to be accused of making any attempt to topple or attack the regime. Persons therefore can be arrested and detained only on grounds of their mental attitude (as members of an illegal group) instead of their behaviour (interview with Sultangaliyeva, former Director of the Kazakhstan Institute for Strategic Studies). As Vitaly Ponomarev, Head of the Central Asia department of the Russian Memorial Human Rights Center makes clear, until 1998 the penal code was hardly ever applied to religious extremists except for convictions regarding possession of illegal drugs and weapons (which were planted during their arrest) (interview with Ponomarev). From 1998 to 2001, however, the majority of Islamists were convicted of acting against the constitution while more recently articles against the distribution of material threatening public security (Art. 244-1) and membership of a banned group (244-2) have been applied (interview with Ponomarev).

If I focus on the banned groups and what has happened to their members, one important point has to be considered: detained persons are likely to become radicalized in prison. Several studies analyze this phenomenon such as Figchel’s paper entitled ‘The Radicalization Process in Prisons’ (Figchel 2007). Although this mainly concentrated on the US and Europe, the following is true globally:

“The prison’s isolated environment, ability to create a ‘captive audience’ atmosphere, its absence of day-to-day distractions, and its large population of disaffected young men, makes it an excellent breeding ground for radicalization” (Figchel 2007: 1).

The International Crisis Group briefing ‘Central Asia: Islamists in Prison’ concentrates on Kyrgyzstan and Kazakhstan specifically (ICG 2009). Here the authors come to the conclusion that the number and political importance

of Islamists in Kyrgyz and Kazakh prisons is growing (ICG 2009: 1). Furthermore, poor living conditions, prevailing corruption and abuse of office in the prisons are severe grounds for concern (ICG 2009: 13). Although I will not go into further details of how the radicalization in prisons takes place I will use it as the main indicator to simulate radicalization through repression. The fact that I have estimated numbers of detainees on religious grounds for all four countries also speaks for this approach.

When discussing the counter-intended effects of repression we should first of all keep in mind, though, that repression itself is considered to be the solution to the existence of radical and terrorist groups. The very fact that more radicalization leads to more repression is also understandable because the state can more easily gain legitimacy for the repression of Islamic groups when these groups become more prominent in society.

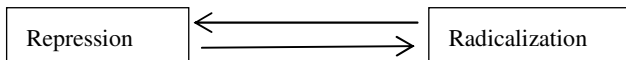
1.1.4. Vicious-Circle Hypothesis

It is important to note that the state suppression of Islamists results in more than just a counter-intended effect. First of all, repression prevents groups from acting overtly, diminishes their proselytizing efforts, reduces their resources and awes their members. For these reasons I will not dwell upon the repression-radicalization hypothesis but develop it further and talk of a vicious circle of repression and radicalization.

Vicious-circle hypothesis:

State repression against Islamic groups and radical political Islam mutually reinforce each other in Central Asia

Figure 3: Vicious-circle Hypothesis



I now give an overview of theories used to understand the revival of Islam in Central Asia and then introduce the methods and data applied in this study for analysing and testing the vicious-circle hypothesis.

1.2. THEORETICAL BACKGROUND

In order to explain the development of political Islam as an opposition power, authors refer to theories such as functionalism, resource-mobilization theory, political process theory or frame theory. However, most of the experts on Central Asian political Islam refer to these theories only in a delimiting way (see for example Karagiannis 2010). Furthermore, in Naumkin's view these theories, as well as theories of political deprivation and economic or psychological explanations, are not useful for an analysis of radical Islam in general and radical Islam in Central Asia specifically. He therefore suggests refraining from using all theoretical approaches to the subject. Hafez also criticizes socio-economic and psychological approaches as well as political process theory; however, he does turn to social movement theory for an explanation of violent Islamism.

I am not interested in the general reasons for why radical Islamism has come about and therefore do not want to judge the usefulness of theories for an analysis of political Islam. Instead I am interested very specifically in the above mentioned interplay of governmental politics and radicalizing tendencies in political Islam. I therefore now provide an overview of theoretical approaches dealing with legitimacy and security politics as well as with constructivism in general. Only in chapter 10 will I elaborate on securitization theory in more detail.

Mainstream approaches in International Relations such as Realism or Liberalism explain insecurity and security politics in terms of objective threats (see Balzacq 2011: xii) which are therefore not useful for analysing the vicious circle of repression and radicalization: They refer to material incentives for explaining participation in armed groups. Therefore, rational explanations disregard legitimacy, which is a very important factor for maintaining or escalating a conflict. Its importance as a precondition for collective action is without controversy in sociology but underestimated in International Relations. Whereas the 'just war' theory investigates under which circumstances war is justifiable, it is more concerned with morality than with its impact on collective behaviour. What I do, however, is not to conduct a normative analysis but to analyze the impact 'described' legitimacy has on the further participation of state and non-state actors in the conflict.

Sociological approaches are useful in this regard: non-material incentives such as a leader's charisma, group ideology or the satisfaction of pursuing justice or vengeance are issues of sociological conflict research (Blattman and Miguel 2010: 15). Schlichte (2009) acts on the assumption of a political sociological viewpoint and identifies legitimacy as a key variable in explaining the success and failure of non-state armed groups. He states that "violence can legitimate power, but it can also have de-legitimizing effects" (Schlichte 2009: 20). Conflict parties must overcome what he calls the 'shadow of violence' (Schlichte 2009: 14) to be collectively capable of acting. "It is the de-legitimizing and legitimizing effects of violence that are at the core of the dynamics which decide about an armed group's fate" (Schlichte 2009: 17). Without legitimacy the mobilization for collective violent action is not feasible.

Furthermore, practitioners acknowledge the importance of 'winning the hearts and minds' of the population in a conflict. NATO for example emphasized the importance of legitimacy as a tool to attain strategic goals in the tactical directive for ISAF soldiers in Afghanistan:

"We will not win based on the number of Taliban we kill, but instead on our ability to separate insurgents from the center of gravity – the people. That means we must [...] operate in a manner which will win their support" (McCrystal 2009: 1).

This was scrutinized in studies on terrorism and counter-terrorism policies. Empirical research on the impact of legitimacy on conflict development has been carried out by Wenger and Zimmermann (2007), who examine the connection between legitimacy and efficiency in the counter-terrorism policies of western states. They find that "combating terrorism is no short-term endeavour. Thus, in the long term, legitimacy matters, both in terms of our self-perception and in terms of the political perceptions of the people affected by global terrorist forces" (Wenger & Zimmermann 2007: 13).

With this I come back to the intended and counter-intended effects of repression and to the vicious circle of violence. If we are looking for a theoretical framework for further developing the vicious-circle hypothesis, we should look no further than constructivism for gaining an understanding of the role of legitimacy, as well as of the counter-intended and mutually reinforcing effects.

The constructivist idea implies that social relations and structures consist of three elements:

- Shared knowledge
- Material resources
- Practices

Shared knowledge is decisive when actors cooperate or conflict (Wendt 1995: 73). In a security dilemma, actors mistrust each other and therefore are prone to use violent means in order to enforce their claims. In a security community, on the other hand, actors share the same knowledge and conflicts can be reconciled. Wendt explains that material resources per se do not promote or prevent conflicts. Instead: “[...] Amity or enmity is a function of shared understandings” (Wendt 1995: 73). The US, for example, is far more concerned by North Korea’s possession of nuclear weapons than by Israel’s. Furthermore, a conflict exists only as long as corresponding practice is executed:

“Social structure exists only in process. The Cold War was a structure of shared knowledge that governed great power relations for forty years, but once they stopped acting on this basis, it was ‘over’ ” (Wendt 1995: 73).

Contrary to rational choice approaches, the constructivist approach assumes that interactions between actors have an influence on their interests and identities. Therefore it is useful to analyze conflicts in general and the vicious circle of repression and radicalization specifically using this approach. It is important to my study that the actors’ perceptions are not mere inventions but are galvanised by real occurrences. However, these occurrences are interpreted and remembered by the actors involved in different ways. In a viable conflict system, the actions of one actor legitimize the actions of his opponent because the actions of both are mutually dependent.²

2 “Viability means that knowledge or other constructions have to prove themselves to be useful and viable in a certain context of use – they have to be appropriate and enable an individual to act and survive in a particular context. This does not mean that constructions have to be true or have to contain accurate de-

In our case, this means that if a suicide attack takes place in a market place, killing civilians, this reinforces their opponents' perception of Islamists as inhuman, irrational lunatics. Similarly, if the US justify the loss of civilians in their 'War on Terror' as 'collateral damage', this reinforces their opponents' perception that the United States' interest in democracy and human rights is duplicitous. This is even easier to prove in case of the Central Asian states which are governed by former Communist party officials who lack any democratic legitimacy.

1.3. METHODS

In addition to a computer simulation, which I use as an analytical method in my study, qualitative research methods such as content analysis and interviews are used. In this chapter I will provide details regarding my qualitative research followed by an overview of agent-based modelling in the social sciences.

1.3.1. Qualitative Research

Laws on religion and terrorism published by the Central Asian governments as well as interviews and publications of religious groups constitute important primary sources for the analysis. The official documents and websites used for analysing the Central Asian governments' position towards religion are listed in *Appendix A*.

Furthermore, it was regarded as essential to include contemporary events in the study and therefore online-news portals reporting in Russian (for example Centerasia www.centrasia.ru and Radio Azattyk <http://rus.azattyk.org>) were reviewed on a regular basis (these provide not only more diverse information about the region than English online-news portals such as Tengri News or EurasiaNet but also a greater amount).

I reviewed secondary analyses on Islam in Central Asia in recent centuries and more specifically in the last few decades in order to gain an overview of the history of its relation to politics. In addition, I reviewed litera-

pictions of reality – neither of these can be proven because they cannot be directly compared to the original” (Flick 2008: 163f).

ture on Islamic terrorism in general and radical groups active in the region in particular. Studies on ‘everyday Islam’ completed this stage of my analysis and raised questions concerning the acceptance of groups adhering to a scriptural interpretation of Islam in the broader Central Asian population.

I directly observed the prevailing mood concerning the relationship of religion and politics in the Central Asian countries during a research trip to Kazakhstan, Kyrgyzstan and Tajikistan from February to March 2013. In addition to formal interviews with experts and devout Muslims in the field (listed in *Appendix B*), several informal talks with ordinary people and observations took place in Almaty, Bishkek and Dushanbe as well as in nearby places of these capitals. In Bishkek I was able to visit a madrasa and a mosque of the Gülen movement as well as a private primary school of the same movement. Outside of the city I conducted observatory research at the Mazar of Baityk Baatyr and the worshipping that took place there. I furthermore could participate in a religious meeting of an unofficial religious class of women in Bishkek that lasted for several hours. In Almaty, I paid a visit to the official city mosque and talked to women working there. In Dushanbe I took a trip to the Ismaili Centre, Haji Yakoub mosque and two small neighbourhood-mosques. Unfortunately I could not realize a planned research excursion to Uzbekistan because of difficulties obtaining a visa.

Finally, I applied the information from the primary sources, secondary analyses and fieldwork in the case studies of the Islamic groups and governments and elaborated a computer simulation model to further develop and scrutinize my assumptions. Because the analytical method of agent-based simulations is not yet well known in social sciences, I will presently give a short overview of simulation methods. Following this, one of the best known agent-based conflict models will be presented. Only in chapter 11 I will expose how I deal with the main elements of agent-based simulation for analysing the religious conflict of state and non-state actors in Central Asia.

1.3.2. Simulation as an Analytical Method in Social Sciences

Computer simulations are still not very commonly used in social sciences even though they are very useful for analyzing dynamic, non-linear and emergent processes: the scientist builds a model of a real-world phenome-

non as a computer-program and runs it to find out if the assumed mechanisms work in the expected way. Although it is possible to conduct statistical analysis to test, for example, exponential growth with nonlinear regression analysis, “the only generally effective way of exploring non-linear behaviour is to simulate it by building a model and then running the simulation” (Gilbert and Troitzsch 2005: 10). A computer simulation model is not very different from other models used in social sciences: “Computational models are formulated as computer programs in which there are some inputs (somewhat similar to independent variables) and some outputs (similar to dependent variables)” (Gilbert 2009: 2). However, there is one big advantage – its usefulness for analysing dynamic and nonlinear developments. Other advantages (for my study) of simulations in general and agent-based models (ABM) in particular are:

- *Bounded rationality*: information is local – agents make up their mind based on their own experiences and on the messages they receive from other agents. Therefore, they do not have all the necessary information to be able to make a rational decision. Secondly, their decisions are influenced by their subjective condition (i.e. socio-demographic precondition), personal memories and experiences, and group propaganda.³
- *Heterogeneity of agents*: individuals support one or the other side in the conflict. Even if they support the same group, they are heterogeneous with regard to their propensity for violence, their experience and to the legitimacy they ascribe to the groups.
- *Interactions between agents*: agents can react to each other and to their environment.
- *Linking of individual behaviour with macro-outcome*: the collective engagement in a conflict can be best explained if one understands the motivation of the individuals taking part in it. The macro-situation can have an effect on the individual behaviour of the conflict.
- Abduction, the ‘third way of doing science’ (Axelrod 2005): conflict assumptions are deduced from my case studies and securitization theory but can be adjusted during the research process.

3 See Epstein: “Individual rationality is ‘local’ also, in the sense that the agent’s expected utility calculation excludes any estimate of how his isolated act of rebellion may affect the social order” (Epstein 2006: 250).

I think it is especially fruitful to analyze the expected vicious circle with an agent-based model because my constructivist assumptions underline the importance of interaction for the emergence of a social phenomenon. Furthermore, security analysis in general should include interactions because, as Clausewitz has made clear, war is never an isolated act but a succession of decisions and acts (Clausewitz 1952: 94f). According to Clausewitz, each conflict-party determines his own actions by assessing those of his opponent based on their “character, constitution, condition and circumstances” (Clausewitz 1952: 97f). What Clausewitz is describing is a “mutual reinforcement”, which is relatively easy to demonstrate using agent-based models (see Gilbert 2009: 2).

In military sciences and military education, simulation methods have a long tradition. Computer simulations are used for the training of military personnel, as well as for the development of doctrines on different levels (Stahel 1999: 187). One example of this is Albert Stahel’s and Pierre Allan’s analysis of the Soviet War in Afghanistan using a dynamic model. This took into account the macro-combat interactions between the Afghan guerrilla forces and the Soviet and Afghan regular armies as well as the support for the guerrillas by the population (Allan and Stahel 1983).

The latter mentioned simulation was a system dynamic model. The main difference between the agent-based and the system-dynamic approach is that the former diverges from a ‘methodological individualism’. This entails explaining macro-phenomena by means of the behaviour and actions of individuals. Although ‘micro dynamics’ are a subgroup of system dynamics which simulate individual behaviour, it has become more common to simulate individual behaviour with agent-based modelling techniques. Agents Based Models (ABMs) allow us to simulate the interaction of individuals and the diffusion of information as well as the analysis of network-effects. The agent-based approach also enables us to analyze a macro-phenomenon originating from the individually heterogeneous behaviour of agents. I attempt to answer my research question with an agent-based simulation and therefore situate my study in the realm of Analytical Sociology.⁴ I am interested in how macro-patterns of social behaviour are caused by individual behaviour and vice-versa. Since in an agent-based simulation each agent behaves according to his decision-rules within a defined environment,

4 See for example <http://analyticalsociology.com/about/>.

I am able to reconstruct the macro-outcome from the definition of the micro-behaviour. Indeed, agent-based simulation “permits one to study how rules of individual behaviour give rise – or ‘map up’ – to macroscopic regularities and organisations” (Epstein 2006: 4). Studies applying agent-based models should be interested in regularity at the macro-level, which can be explained by a theory relying on micro-behaviour of agents.

In contrast to the agent-based approach, system dynamics are based on differential and difference equations. Such mathematical or equation-based models usually specify relationships between variables at the macro-level and are often displayed as stock and flow diagrams:

“System dynamics, as its name implies, models systems of interacting variables and is able to handle direct causal links, such as a growth in population leading to increased depletion of resources, and feedback loops, as when population growth depend on the food supply, but food supply depend on the level of the population” (Gilbert 2009: 18).

In a system dynamic model, the values for the dependent variables are calculated at each time step with the values of the variables at the previous time step, according to the differential or difference equations which make up the model. The relevant variables in the model can be borrowed from a theory, but the forms of the equations which define the system-behaviour are usually derived from statistical evidence, and not from theory (Gilbert 2009: 5).

None of the model-types presented above is generally better or worse for simulating social phenomena. Whichever type is more suitable in a specific project depends on the research question:

“The choice of agents versus equations always hinges on the objectives of the analysis. Given some perfectly legitimate objectives, differential equations are the tool of choice; given others, they’re not. If we are explicit as to our objective, or explanatory criteria, no confusion need arise” (Epstein 2006: 29).

System-dynamic models are very useful when large populations of homogeneous agents are studied because they deal with aggregates (Gilbert 2009: 20). Therefore, a system dynamics model is appropriate if I base my study on a theory which explains macro-mechanisms. On the other hand, an ex-

planation on the micro-level is easier to formulate with an agent-based model, where the behaviour of individuals leads to the macro-phenomenon. If one needs to simulate heterogeneity among the agents or if the agents' behaviour depends on their past experience or memory, it is also useful to design an agent-based model (Gilbert 2009: 20). I consider here radicalization to be the process of ideological (re-)orientation that an individual undergoes. In my view, it is for this reason that the agent-based modelling technique is appropriate for modelling the securitization of Islam in Central Asia.

1.3.3. Epstein's Conflict Model

In order to embed my study in the current literature and in order to provide an outline of a well-known agent-based conflict model, I will briefly introduce Epstein's 'Modelling Civil Violence'. Epstein's study is of special interest to me because it analyzes, among other things, the impact of legitimacy on the dynamics of a civil rebellion. In his book 'Generative Social Science' Epstein presents two models: one in which a decentralized rebellion rises up against a central authority, and one where two different intra-state groups fight each other and the central authority tries to separate them. In this review I will only present the first model (Epstein 2006: 245ff).

Epstein develops an entirely theoretical model without testing his hypothesis with reference to a real case. His aim is to elaborate on the main dynamics of civil violence. There are two agent-types; the so called 'agents', representing citizens, and 'cops', who stand for the central authority. The agents can take part in the uprising (they are 'active') or they do not participate (they are 'quiescent'). They become active if they are aggrieved, which depends on their perceived hardship (uniform distribution among the agents) and on the legitimacy of the regime they are living in (exogenously given).⁵ A further factor is the risk aversion of the agents, which is heterogeneously distributed among the agents, but fixed for each individual's lifetime. The risk aversion factor influences whether the agents become active or not. The agents calculate at each time-step the perceived probability of being arrested, which also depends on the active agents and

5 $G = H * (1 - L)$ (G = grievance, H = perceived hardship, L = legitimacy).

on the cops within their vision.⁶ During these calculations, the agents are rational, but because their calculation depends on their subjective vision and their decision (to become active or not), which is influenced by their specific risk-aversion, they are *boundedly* rational.

The following three rules comprise the micro-specification, which defines the agents' and cops' behaviour in Epstein's model.⁷

- Agent rule **A**: If $G - N > T$ be active; otherwise, be quiet. (whereas G = individual Grievance; N = Netrisk, $R * P$; T = Threshold)⁸
- Cops rule **C**: Inspect all sites within v^* and arrest a random active agent.(whereas v^* = cops' vision)
- Movement rule **M**: Move to a random site within your vision. (holds good for agents as well as for cops, whereas v = agents vision and v^* = cops vision)

I will not elaborate more on the details of this micro-specification, which can better be understood if one reads the original text of Epstein (2006: 245–270). The presentation of his model here only serves to display how the very simple agent rules presented above can lead to the following findings, which are interesting for my research purpose:

- Under an illegitimate regime, rebellion is more likely than under a legitimate regime. If the legitimacy of a regime steadily declines from a high state to 0 (no legitimacy at all), the probability for an uprising is much smaller than in a scenario where the legitimacy is reduced only a little but at once.
- As we see, a reduction of legitimacy can trigger rebellion. On the other hand, a reduction of repression can also lead to a rebellion

6 $P = 1 - \exp[-k(C/A)v]$ (P = perceived probability to be arrested; C = number of cops; A = number of agents; k = parameter).

7 See for the implementation of Epstein's model into a NetLogo Model (Wilensky 2004).

8 $G H (1-L)$ (whereas H = exogeneously given perceived hardship, heterogeneous among agents; L = legitimacy of the regime, exogeneous and equal among agents).

- The society's ripeness for revolution can be measured by the average grievance, number of inactive agents and average risk aversion.⁹

These findings are especially relevant as many defenders of authoritarian regimes state that a reduction of repressive means in their countries would jeopardize political stability. On the other hand, human rights defenders would argue that the strong repression of Islamist groups, for example, against Hizb ut-Tahrir, only drives them to violence.

In contrast to Epstein I am primarily interested in the link between legitimacy and repression, or in what Schlichte (2009) calls the 'shadow of violence'. Securitization theory states that extraordinary means can only be implemented if the audience accepts the securitization. To answer my research questions, it is crucial to ascertain how authoritarian regimes establish legitimacy for their security policies and what impact this has on their opposing non-state actors. According to securitization theory, I assume that the violent (or extraordinary) means of a group are linked to the legitimacy the audience has ascribed to this group.

Unfortunately, social scientists using computer simulations as a method all too often pay little attention to the deduction of the assumptions used in the models and to the empirical survey of their outcomes. Instead, they develop very sophisticated and complex systems. But even the most sophisticated and complex computer model does not help us to understand social processes if it is not based on correctly deduced assumptions which are tested afterwards. For this reason, it is important to keep in mind the rules of social science research when computer simulations are used. Therefore, I pay as much attention to high-quality qualitative research as to an innovative computer model and describe my model with a standardized ODD protocol.

At no point in time should it be forgotten that a simulation is only a simplified model of reality and that it is not reality itself. Neither, therefore, should too much importance be attributed to the interpretation of the simulation itself despite the many advantages of the method. Instead, the simulation outcome can only be understood if it is thoroughly embedded in a case study.

9 $\bar{G}\bar{B}/\bar{R}$, whereas \bar{G} = average grievance, \bar{B} = frequency inactive agents, \bar{R} = average risk aversion.

1.4. DATABASES, COUNTRY REPORTS AND COUNTRY PROFILES

Apart from the qualitative research of primary and secondary literature, I used different databases, country reports and annually updated country profiles for my study.

Data used for the comparison of the countries and as input for the simulation stem from:

- CIA World Factbook (2012)
<https://www.cia.gov/library/publications/the-world-factbook/>
- EIU, The Economist Intelligence Unit (2013): Democracy index 2012. Democracy at a standstill. A report from The Economist Intelligence Unit. The Economist Intelligence Unit Limited: https://portoncv.gov.cv/dhub/porton.por_global.open_file?p_doc_id=1034
- Freedom House: country reports <http://www.freedomhouse.org/>
- Gibney, M., Cornett, L., Wood, R., and Haschke, P.: Political Terror Scale (2013): <http://www.politicalterror scale.org/>
- Human Security Report (2012): <http://www.hsr group.org/human-security-reports/2012/overview.aspx>
- International Institute for Strategic Studies: Military Balance (2012)
<http://www.iiss.org/en/publications/military-s-balance>
- Reporter ohne Grenzen, country ranking (2013)
<https://www.reporter-ohne-grenzen.de/pressearchiv/ranglisten-pressefreiheit/>
- Transparency International, Corruption Perceptions Index (2012)
<http://www.transparency.org/cpi2012/results>
- US State Department Country Reports on Terrorism (2013)
<http://www.state.gov/j/ct/rls/crt/2012/209983.htm>

The CIA World Factbook provides country information for many issues such as society, economy and infrastructure. It is a reliable source of statistical data. The Military Balance provides annual information about global military capabilities and defence economics and is widely accepted as a reliable source for security studies. It is compiled by the International Institute for Strategic Studies which is located in the United Kingdom. The Political Terror Scale measures human rights violations committed by state

actors. It relies on the same sources as the better known Cingranelli and Richards Human Rights Data Project (CIRI) but has improved its coding system (for further information about this difference see the project's website). Reporter ohne Grenzen ('Reporters without borders') annually publish an international ranking of the freedom of press. Transparency International does the same for perceptions on corruption around the world. As these organizations are impartial the rankings are judged as objective. The US State Department's Country Reports on Terrorism are used as an additional source of information concerning terrorist incidents in the Central Asian countries. All information provided by state actors is handled carefully in my study as these actors are prone to political bias (in this case for example with regards to the classification of groups as either 'extremist' or 'terrorist').

In order to validate my simulation results I use the following databases:

- Global Terrorism Database (GTD)
<http://www.start.umd.edu/gtd/>
- Association of Religion Data Archives (ARDA)
<http://www.thearda.com/internationalData/>

Both databases are from the US. GTD is a project of the University of Maryland and of the National Consortium for the Study of Terrorism and Responses to Terrorism (START) which is a Center of Excellence of the U.S. Department of Homeland Security. GTD is available online "in an effort to increase understanding of terrorist violence so that it can be more readily studied and defeated" (GTD). The data provided by GTD are collected from news articles. I regard the database as very valuable because it allows us to search for many different variables, such as the perpetrators of an attack, the weapons used and the targets of the attack. Furthermore, every incident is briefly described which provides the user of the database with additional information such as the sequence of events.

ARDA is an interesting database to survey and compare the religious landscapes of different countries. It is part of the Religion and State project (RAS) of Bar Ilan University in Ramat Gan, Israel. ARDA gives an overview of the countries' histories and religious demographics and provides statistical data on religious adherents. Furthermore, it provides religious freedom indices on government regulation, social regulation and govern-

mental bias towards certain religions, and lists the constitutional articles regarding religion.

In order to visualize the contemporary diffusion of religious preferences and attitudes among Muslims in Central Asia I referred to the following databases and reports of the US Pew Research Center (PEW):

- Global Religious Futures Project
<http://www.globalreligiousfutures.org/countries>
- The World's Muslims: Unity and Diversity (2012):
<http://www.pewforum.org/files/2012/08/the-worlds-muslims-full-report.pdf>
- The World's Muslims: Religion, Politics and Society (2013)
<http://www.pewforum.org/files/2013/04/worlds-muslims-religion-politics-society-full-report.pdf>

PEW provides representative survey data on different topics and religious issues and is extremely useful for my purpose because it enables us to contrast official data with information from face-to-face interviews with ordinary Muslims. PEW data for Uzbekistan is judged most problematic. Here, some questions are missing, as they were not asked in order “to avoid offending respondents and/or risking the security of the interviewers” (PEW 2012: 117). Furthermore, “large scale labor migration patterns may have contributed to fewer interviews with male respondents” in Uzbekistan (PEW 2012: 119).

For discussing the state regulation of religion and of religious groups I additionally rely on:

- Amnesty International: country reports
<http://www.amnesty.ch/de/laender>
- United States Department of State Bureau of Democracy, Human Rights and Labor: International Religious Freedom Reports
<http://www.state.gov/j/drl/rls/irf/>

It is important to mention that it is difficult to verify information concerning religious freedom as western interest in this issue is generally restricted to the promotion of human rights. Many reports therefore refer to each other. ARDA, for example, refers to the CIA World Factbook, United Nations

Human Development Reports and the US State Department's International Religious Freedom Reports. PTS refers to Amnesty International and United States Commission on International Religious Freedom (USCIRF). The PEW survey data therefore provides an interesting addition to these data. Furthermore, the inclusion of some publications and articles in Russian should help to avoid an excessively western- (and specifically US-) oriented perspective on the topic.

