Chapter 11

Analyzing Radicalization and Terrorism: A Situational Action Theory

Per-Olof H. Wikström and Noémie Bouhana

Despite a noticeable uptake in data-driven research (LaFree & Ackerman, 2009), the study of the causes of terrorism and radicalization remains theoretically fragmented, leading at least one prominent scholar to express concern about the so-called stagnation of scientific research in this field (Sageman, 2014). In contrast to this pessimistic diagnosis, criminologists have argued that there is much to learn from research on crime and criminality, which could advance our understanding of the causes of non-state political violence, be it in terms of transferable research methodologies, analytical concepts, approaches to prevention, or theoretical frameworks (Deflem, 2004; Forst, Greene, & Lynch, 2011; Freilich, Chermak, & Gruenewald, 2015; LaFree & Freilich, 2012; LaFree, 2007; Rosenfeld, 2002).

Owing perhaps to the availability of large open datasets that aggregate event-level information, such as the Global Terrorism Database (LaFree & Dugan, 2007; LaFree, Dugan, & Miller, 2015), this criminological enterprise has added chiefly to our knowledge of the characteristics, distribution, and predictors of terrorist events, thanks to a number of studies guided by opportunity-focused approaches, such as rational choice, routine activities, crime pattern, and repeat victimization frameworks (Braithwaite & Johnson, 2011, 2015; Canetti-Nisim, Mesch, & Pedahzur, 2006; Clarke & Newman, 2006; Dugan, LaFree, & Piquero, 2005; Hamm, 2005; Parkin & Freilich, 2015), or by deterrence perspectives (Argomaniz & Vidal-Diez, 2015; Dugan & Chenoweth, 2012; Faria, 2006; Hafez & Hatfield, 2006; LaFree, Dugan, & Korte, 2009). By comparison, efforts to apply major criminological theories to our understanding of
the development of terrorist criminality and individual involvement in terrorist action have been less conspicuous, with some notable exceptions (Agnew, 2010; Bouhana & Wikström, 2010, 2011; Fahey & LaFree, 2015; Pauwels & Schils, 2014).

Yet, as has been argued elsewhere, a scientific knowledge base that ambitions to inform prevention efforts needs general theoretical frameworks capable of explaining, organizing, and reconciling frequently disparate and patchy empirical findings (Wikström, 2011). To the extent that blocking opportunities for terrorist activity and deterring terrorists have not yet proven enough to control the threat of terrorism, and to the extent that governments continue to promote prevention efforts aimed at suppressing the disposition to commit acts of terrorism in the population (see, e.g., the 2011 Revised Prevent Strategy in the United Kingdom), robust theories are needed that can organize and articulate our knowledge base of how individuals come to perceive acts of terrorism as an alternative for action—a process commonly known today as radicalization.

In this chapter, we answer the call from Freilich and LaFree (2015) for criminologists to broaden their enquiry and address terrorism from the perspective of major criminological theories, by applying situational action theory (SAT; Wikström, 2006, 2010, 2014) to the explanation of terrorism and radicalization. SAT is a recently formulated theory of moral action and crime causation that builds upon insights from criminological theory and research in particular, and draws from the social and behavioral sciences more generally, to explain why people commit acts of crime.

First, we offer a few comments about the importance of mechanism-based and integrative explanations with regards to accounts of terrorism specifically and crime more generally. Second, we introduce SAT and discuss how it can be applied to the study of terrorism and radicalization. Last, we conclude by outlining the priorities of a SAT-driven research agenda,
thereby addressing Sageman’s concern regarding the absence of systematic research programs in terrorism research (Sageman, 2014).

Importance of Mechanism-based and Integrative Explanations

In a recent review of the academic literature on the so-called “home-grown” Islamic radicalization, Anja Dalgaard-Nielsen (2010) identifies three main categories of approaches, each concerned with a different level of analysis: (1) French sociological accounts, which focus on the role of the macro-cultural and socioeconomic context in the radicalization process, with particular attention to factors that could explain the appeal of radical Islam for seemingly well-integrated Muslims; (2) social movement and network theories, which privilege the individual’s immediate psycho-social environment to explain how they become exposed to, and eventually adopt, radicalizing ideologies, to the point of involvement in terrorism; and (3) largely atheoretical accounts, which analyze the background characteristics of terrorists in search of empirically grounded typologies of actors and their motivations, and of distinct “pathways” into radicalization. Nielsen concludes that, while each category of accounts addresses salient elements of the radicalization process, all of them fall short of being a full theory that could tackle the “problem of specificity” (Sageman, 2004) and explain why the majority of individuals experiencing these particular conditions (e.g., an inimical socio-economic context; membership in a social network containing radicalized individuals; socio-political grievances) do not undergo the process of radicalization. Nielsen goes on to suggest that these accounts should be seen as complementary, rather than competing.

Similarly, Schmid (2014) contends that radicalization studies have privileged the micro level of analysis, but that full explanations should integrate the meso (community) and macro
(structural) levels as well, although the strategy that should be adopted to effect this integration is not outlined. Taylor and Horgan (2006, p. 587) recommend that the study of terrorism should be brought “within a broader ecological framework,” but their process model of terrorism involvement falls short of articulating those processes through which factors at different levels of analysis are theorized to interact. The choice to draw from the criminological notion of “individual pathway” leads to the inevitable conclusion that routes into terrorism are irreducibly discrete, which would seem to impede the statement of a general developmental model. Meanwhile, the psychological perspective adopted by Taylor and Horgan, while legitimate in itself, means that an examination of the emergence of ecological conditions that support radicalization or terrorist involvement is largely out of bounds. Veldhuis and Staun (2009), for their part, have put forward a “root cause model” of radicalization in response to the weaknesses of “phase models,” which offer, at best, chronological deep-descriptions of the radicalization process in a particular context (Moghaddam, 2005; Silber & Bhatt, 2007), while failing to provide a framework to differentiate between indicators (symptoms or markers) and genuine causal factors. Arguably, Veldhuis and Staun (2009) contribute a valuable synthesis of the factors associated with radicalization at several levels of analysis, but their “model” relies on enumeration more than integration. How one should determine the exact role and assess the relative importance of each category of factors is unspecified; the lack of an explicit theoretical framework manifests notably in the omission of an intermediate level linking macro and micro levels of explanation.

This challenge of integration should be familiar to criminologists. In an ambitious paper published in *Crime and Justice*, Weisburd and Piquero (2008) set out to test the respective “explanatory power” of theories of crime located at different levels of analysis. They concluded that all theories leave the bulk of the variance unexplained, and advised that each theoretical approach should look to “what is not explained” (p. 453), if scientific progress is to continue.
One might be tempted to address this difficulty by throwing any and all “risk factors”—individual, situational, social, ecological, macro-social—into the pot and hunting for statistical covariates of the outcome of interest (here: terrorism), but the limitations of this approach are recognized even by its proponents (Farrington, 2000), and have been discussed at length elsewhere (Wikström, 2011). In the search for risk factors, one quickly finds oneself overwhelmed by long lists of significant correlates, with no way to discriminate between symptoms, markers, cause, and accidents of statistics.

Alternatively, one might take the more difficult road—stop “segregat[ing] the ‘ingredients’” of crime or terrorism, or, conversely, stop “including everything” willy-nilly, but instead seek to articulate the “rules of interaction” between levels of analysis (Sullivan, McGloin, & Kennedy, 2011); in other words, between the individual and his or her (developmental or behavioral) environment. In short, one might abandon a risk-factor-based approach in favor of mechanism-based accounts, whereby mechanism is defined, in the scientific realist tradition, as the causal process that links the cause to its effect (i.e., that explains how the cause brings about the effect).

Because mechanisms are inherently unobservable aside from their effects (think of gravity), they have to be conjectured from (hopefully valid) observations. In rare cases, the initial effort of conjecture occurs from scratch. More often, to kick-start this deeper theory-building, scholars’ draw from cognate fields of study where understanding is more advanced, owing, often, to the greater availability of data. SAT (Wikström, 2011; Wikström & Treiber, 2015), which explains how acts of crime (including those defined as acts of terrorism) arise from the interaction between a person’s propensity and his or her exposure to crime-promoting environments, is one such mechanistic theory. It provides a framework from which to derive analytically plausible causal mechanisms from observations, and within which, more broadly,
to organize our knowledge of the factors involved in the explanation of acts of terrorism and the individual process of radicalization at different levels of analysis (Bouhana & Wikström, 2010, 2011).

**SAT**

SAT is a general, dynamic, and analytical theory of human action and crime causation (e.g., Wikström, 2006, 2010, 2014). It aims to explain all kinds of crime (hence, *general*), stressing the importance of the person–environment interaction (hence, *dynamic*) and mechanism-based explanation (hence, *analytical*). In a nutshell, the theory proposes that people ultimately commit acts of crime because they (1) perceive them as a morally acceptable action alternative, given the circumstances (and no relevant deterrent is strong enough), or (2) fail to adhere to personal morals (i.e., fail to exercise self-control) when they are externally incited to break them. To explain why people, for example, deliberately crash an airplane into a building, blow themselves up in a crowded underground train, or go on a shooting spree on a beach, we need to understand why they come to see such acts as an acceptable action alternative (or fail to resist external pressures to carry out such acts). A crucial question for the analysis of acts of terrorism then becomes:

*why do some people come to see acts of terrorism as acceptable, or become externally pressurized to carry out acts of terrorism?*

**Rule-guidance: Crime as Moral Actions**
SAT rests on the basic assumptions that humans are essentially rule-guided creatures, and that society (social order) is based on shared rules of conduct (Wikström, 2010). People express their desires, and respond to frictions, within the context of rule-guided choice. The patterns of human behavior we observe are fundamentally an outcome of rule-guided routines. SAT defines and analyzes acts of crime as moral actions, that is, actions that are guided by value-based rules of conduct specifying what is the right or wrong thing to do (or not do) in response to particular motivations in particular circumstances. Acts of crime are specifically defined as “breaches of rules of conduct stated in law,” and this is what all acts of crime, in all places, at all times, have in common, and what makes a general theory of crime causation possible. Acts of terrorism are breaches of rules of conduct stated in law, and may therefore be explained as such.

SAT asserts that the same process that explains why people follow or break rules of law should also explain why they follow or break other kinds of moral rules (e.g., informal rules of conduct). Understanding why people break rules of conduct stated in law is, hence, a special case of a more general understanding of why people follow and break rules of conduct.

Against the background that people’s actions characteristically are rule-guided, that social order is based on shared rules of conduct, and that acts of crime are actions that break rules of conduct stated in law, SAT proposes that people’s crime propensities (tendencies to see particular kinds of crimes as viable action alternatives) are largely dependent on personal morals (moral rules and their associated moral emotions) and the ability to exercise self-control (i.e., the ability to act in accordance with one’s own personal morals). SAT further suggests that the criminogenic inducements (encouragements, or lack of discouragements, of particular kinds of acts of crime) of places (environments) principally depend on the efficacy
of the moral norms and their enforcement in those places, relevant to the motivations (temptations, provocations) that the actor experiences at any given time.

**Situational Causes: Interactions and Action Mechanisms**

A second set of basic assumptions that underpin SAT is that people are the source of their actions (people perceive, choose, and execute their actions), but that the causes of the actions are situational. People’s motivations, their particular perception of action alternatives, process of choice, and execution of action in response to motivations are triggered and guided by the relevant input from the person–environment interaction. The “situation” cannot be reduced either to the person (propensities) or the place (environmental inducements), but is, instead, the outcome of the input from their particular combination, creating a specific motivation and perception of action alternatives. At times, propensity is the greater influence; at other times, it is exposure (environmental inducements)—but there is always a minimal interaction between the two.

The perception–choice process—triggered and guided by the interaction between the person and the setting (immediate environment)—is the action mechanism that explains what kind of action (if any) they will take in response to a particular temptation or provocation. The key elements of the action process are motivation, the moral filter, and controls. Motivation (temptations, provocations) initiates the action process by providing goal direction (a necessary, but not sufficient, factor); the moral filter, defined as “the moral rule-induced selective perception of action alternatives in relation to a particular motivation,” provides action alternatives; and controls (self-control, deterrence) affect the process of choice when, and only when, people deliberate over conflicting action alternatives. When a person is
externally pressured to do something against his or her personal morals, whether or not he or she will do it depends on his or her ability to exercise self-control. When a person considers and finds an act of crime acceptable in the circumstances, whether or not they will carry it out depends on the presence of relevant and efficient deterents (see further, Wikström, 2014:78–83).

Most people who have been provoked or frustrated into action—for example, by the foreign policy decisions of their government (motivation)—will never come to perceive terrorism as an action alternative. Lacking the propensity for terrorism, they will not even consider it, but may instead entertain other alternatives, such as taking part in a public protest, writing to their elected representative, or simply complaining about it to a friend. Of those who do perceive terrorism as an alternative, not all will choose to carry out such an act in a given situation (hence, radicalization does not entail involvement in terrorism). The situational model of SAT also explains how individuals who do not perceive terrorism as a possible alternative (who have not been radicalized) may yet become (knowingly) involved in an act of terrorism under situational pressures that overcome their capacity for self-control (i.e., the capacity to act in accordance with their own personal morals).

The “Causes of the Causes”: Psychosocial and Socio-ecological Processes

SAT stresses the importance of clearly differentiating between “causes” and the “causes of the causes” when analyzing crime causation. The problem of why people vary in their crime propensities, why environments vary in their criminogeneity, and why people vary in their exposure to criminogenic settings are all questions best addressed as questions about the “causes of the causes.” For example, the question about the role of “radicalization” in
understanding “terrorism” is primarily a question about “causes of the causes” rather than causes. The question about how people come to develop propensities (personal morals) that make certain acts of crime acceptable, such as the killing of cartoonists whose work is regarded as offensive, is a question about the “causes of the causes” of terrorism.

SAT insists that the social and developmental causes of crime (as causes of the causes) are best analyzed in terms of emergence-selection processes. What kinds of people and what kinds of environments (settings) are present in a jurisdiction is the result of historical processes of personal and social emergence, and sets the stage for which kinds of interactions can occur in the particular jurisdiction. Contemporaneous processes of social and self-selection create the interactions that cause the situations to which some people may respond by committing acts of crime.

As regards personal emergence, SAT suggest that psychosocial processes of moral education and cognitive nurturing (Wikström & Treiber, 2016) are the key to understanding why people develop different crime propensities (because crime propensities are based on specific law-relevant personal morals and abilities to exercise self-control) and may change in propensity over time (e.g., “radicalize”). Moral education may be defined as “the learning and evaluation process by which people come to adopt and change value-based rules of conduct about what is the right or wrong thing to do in particular circumstances.” The process of moral education largely builds upon three sub-mechanisms: (1) instruction, (2) observation, and (3) trial and error (see further, Wikström & Treiber, 2016). The efficacy of moral education principally depends on its homogeneity (i.e., the degree of moral correspondence of the relevant instructions, observations, and trial-and-error incidents that the person experiences). People are not, however, passive recipients of new and changed moral experiences, but actively evaluate (and re-evaluate) them in light of their current set of personal morals and their cognitive
capabilities. In this context, “radicalization” may be thought of as a process of moral education. Cognitive nurturing refers to the experiential processes that positively influence neurocognitive abilities (capacities and their expression). It can be argued that two main criteria determine a person’s cognitive abilities at any given time: his or her basic neurological constitution, and the extent to which his or her specific capabilities have been exercised (see further, Wikström & Treiber, 2016). Moral education and cognitive nurturing are not unrelated, because cognitive deficiencies can affect a person’s ability to adequately understand, internalize, and apply rules of conduct. Understanding psychosocial processes of person emergence are important because they help us understand how people become vulnerable to “radicalization” and become “radicalized.”

As regards social emergence, SAT asserts that historic socio-ecological processes resulting in a particular spatial and temporal differentiation of kinds of people (with specific propensities) and kinds of activities (with specific inducements) in a jurisdiction are key to understanding why places (settings) come to vary (and vary temporally) in their moral contexts—that is, in their moral norms and levels of enforcement (and, thus, why some places are more criminogenic than others). People act and develop in settings, and hence the exposure they have to particular moral contexts will play an important role, in the longer term, for their development of particular propensities and, in the immediate term, for their specific actions. Processes of social emergence are important for the understanding of how particular moral contexts appear, such as those promoting “radicalization.”

*Exposure to Criminogenic Influences: Social and Self-selection*
SAT suggests that contemporaneous processes of social and self-selection explain why people (and groups of people) within a jurisdiction vary in their exposure to criminogenic settings (Wikström, 2014:84). *Social selection* refers to rules and resource-based social forces that encourage or compel, or discourage or bar, particular kinds of people from taking part in particular kinds of time- and place-based activities. Processes of social selection link macro and micro conditions in the explanation of human action and crime. *Self-selection* refers to the preference-based choices people make to attend particular time- and place-based activities within the constraints of the forces of social selection. Processes of social and self-selection place kinds of people in kinds of settings, creating the particular kinds of interactions against the background of which they, in the longer term, will develop and change their propensities and, in the immediate term, will act. Processes of social and self-selection are crucial to our understanding of how people come into contact with particular moral contexts, such as, for example, moral contexts that, through their moral education, promote “radicalization.”

*Self-selection* operates on the basis of an individual’s *preferences* (likes and dislikes), acquired through life experience (Druckman & Lupia, 2000). Olsen (2009) recounts how a preference for political engagement led one young individual to take part in a demonstration, where he was given to observe a group of young rioters. The youth thought that this “was really exciting … this group, they were all my age, I could identify with them and they made something of themselves” (p. 14). He later approached them. This example illustrates how the non-radicalizing features of a setting can act as a personal draw, incidentally exposing people to terrorism-promoting influences. Self-selection being an ongoing process, preferences acquired during the earlier stages of radicalization can result in more intense and sustained exposure, such that some individuals may eventually graduate from sporting grounds in Birmingham and Internet cafes in London to training camps in Afghanistan.
Social selection sets the stage for self-selection, by broadly constraining the kinds of settings that people are likely to find themselves in. Observations suggest that individuals who belong to certain groups—for example, young people, residents in Muslim communities, students, immigrants, people with a criminal history—are over-represented among home-grown terrorists at certain times (for a full review, see Bouhana & Wikström, 2011). They also suggest that radicalizing settings are not distributed evenly, but that they are found in some kinds of environments at certain times more than others (particular countries, communities, neighborhoods, institutions; e.g., Jordán & Trujillo, 2006; Genkin & Gutfraind, 2011, on radicalization “magnets”; Hamm, 2013, on US prisons that produce more environments supportive of radicalization, compared to others). In response to this, the UK 2011 Prevent strategy lists 25 “priority areas”—cities and boroughs of London—which, the document states, should be targeted for local delivery of the strategy.

Beyond area of residence, the logic of social selection also suggests that membership to certain social groups may affect the chance of exposure to radicalizing contexts, much as it affects the likelihood of exposure to criminogenic settings in the context of other crime (e.g., Treno, Gruenewald, Remer, Johnson, & Lascala, 2008; Wikström, Oberwittler, Treiber, & Hardy, 2012). In many societies, individuals from an Islamic ethno-religious background are more likely, compared to individuals without such a background, to find themselves in places where Muslims routinely congregate (e.g., mosques, Islamic bookshops, youth clubs, halal butcheries; see House of Commons, 2006, for a discussion of the association between such sites and the radicalization of the 7/7 bombers). If radicalizing features are more prevalent in such places (at particular times, in particular locales), then the people exposed to radicalizing influence (at those times and in those locales) would be more likely to have a Muslim background. Occupation may also be a factor of social selection. For example: in a given society where, due to the organization of social life (structures and routines), students had the opportunity to spend
significantly more hours of the day surfing the Internet compared to most working adults, individuals exposed to virtual radicalizing settings would be more likely to be students. (This state of affairs would, of course, change as technology made it easier for different kinds of people to spend a lot of time online, likely leading to a diversification of “profiles” of online radicalization.) People with a criminal history are more likely than non-criminals to be exposed to a prison environment, while asylum seekers are (still on logical grounds) more likely to spend time in immigration centers than non-asylum seekers, and students are more likely to spend time on university campuses—all environments that, at one point or another, and with or without cause, have been dubbed “hotbeds” of radicalization (House of Commons, 2012).

In short, given the organization of social life and the location of radicalizing settings, some categories of people may be more likely to be exposed (at some times and in some locales) compared to the rest of the population, as a result of social selection. If that is the case, then social selection may be one of the key processes that would explain why members of particular terrorist cells, groups, or particular campaigns or waves may share some socio-demographic characteristics (they meet in places that draw people with these characteristics), yet the search for general terrorist “profiles” remains futile (radicalizing settings displace to new environments over time, if only as a result of counterterrorist activity); hence, the kinds of people socially selected for exposure change over time.

**Coda:** propensity for terrorism. SAT explains radicalization as the outcome of the interaction between an individual susceptible to moral change and the radicalizing settings present in that individual’s activity field. Susceptibility to moral change is the outcome of a psychosocial process of personal emergence, while radicalizing settings are the product of a process of social ecological emergence.
The features most relevant to the radicalizing character of a setting are an ineffective level of formal and informal social control (monitoring of socializing activity); the promotion of radicalizing (terrorism-supportive) moral teachings (directly or remotely accessible in the setting); and the opportunity to form attachments to the sources (radicalizing agents) of these radicalizing teachings (Bouhana & Wikström, 2011). SAT proposes that to explain why radicalization occurs in particular places at particular times is to explain why radicalizing settings emerge where and when they do and are sustained, while to explain why some (susceptible) individuals rather than others radicalize (the problem of specificity) is to explain why some people rather than others are exposed to the radicalizing settings in their environment through processes of self-selection and social selection.

Those systemic (i.e., macro) processes that are, therefore, of interest in the explanation of radicalization are those implicated in (1) the psychosocial processes involved in the personal emergence of individuals susceptible to moral change; (2) the social ecological processes involved in the emergence of settings with radicalizing features; and (3) the operation of processes of self- and social selection (why certain kinds of people are exposed to certain settings).

Against this background, we propose that, to better understand acts of terrorism and radicalization, we need a mechanism-oriented research agenda that focuses around advancing knowledge regarding three main topics:

(1) Explicating the psycho-social processes (processes of moral education and cognitive nurturing) relevant to why people become radicalized
(2) Explicating the socio-ecological processes (processes of population and activity segregation and differentiation) relevant to the social emergence of moral contexts (place-based moral norms and their enforcement) promoting radicalization

(3) Explicating the relevant processes of social and self-selection that introduce susceptible people to radicalizing moral contexts

Armed with such a model of how factors at different levels of analysis interact to produce radicalization, it becomes possible to hypothesize the role (or lack thereof) of, for example, a given systemic factor (e.g., residential segregation) by asking how they could be implicated in psychosocial processes of personal emergence, social ecological processes of setting emergence, and processes of selection. Being able to formulate a plausible causal account will be crucial for research. Data and designs required to investigate social ecological processes will be quite different from data and designs needed to study psychosocial development. Greater analytical depth may eventually reconcile contradictory claims as to the role of systemic factors, such as poverty or political structures, in the radicalization process: some factors may play different roles in the emergence of different processes, or impact some but not others.

Empirical findings do not speak for themselves. A knowledge base capable of supporting policy must contain more than a catalogue of significant factors and regularly observed outcomes: it must include theories that advance explanations of how the former produces the latter. This necessitates going beyond empirical generalization to conjecture inherently unobservable but plausible causal mechanisms. Knowledge is achieved when facts are explained, rather than described. The first step toward building a policy-relevant knowledge
base is therefore to develop theoretical frameworks that explain how causal mechanisms operating at different levels of analysis interact to produce the outcome of interest (Wikström, 2011). As physicist and philosopher of science Mario Bunge (2004, p. 182) puts it, “[f]inding [causal] mechanisms satisfies not only the yearning for understanding, but also the need for control.”
Bibliography


Notes

1 Acknowledgment: Bouhana acknowledges support from EC Grant Agreement n. 608354 (PRIME) FP7-SEC-2013-1. Her contribution to this chapter reflects her views only. The European Union is not liable for any use that may be made of the information contained therein.


3 In SAT, moral emotions such as shame and guilt are regarded as measures of strength of particular moral rules.

4 Depending on the strength of one moral’s commitments or of one’s capacity for self-control, the situational pressures required to move such an individual to terrorist action may go from strong provocation (e.g., threat to the life of loved ones if one does not engage in terrorism) to mild temptation (e.g., incitement from friend or kin to go along in the terrorist enterprise).

5 The concepts of “place” and “setting” are closely related and overlapping. According to SAT, the difference is that “place” refers to a specific location in time and space and its immediate environment (objects, people, events), while “setting” refers to the part of the immediate environment that a person in a specific location experiences with his or her senses.

6 Given the organization of society, there are places where people cannot go (or are less likely to go) even if they want to, because they lack the means, or because formal or informal constraints stand in the way (e.g., families not being able to afford certain schools; underage children not being allowed on premises that serve alcohol; women not being allowed to attend certain religious ceremonies).

7 The effect of social selection is, of course, probabilistic, not deterministic.