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Brauer, Jurgen and Caruso, Raul

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“FOR BEING ABORIGINAL”: ECONOMIC PERSPECTIVES ON PRE-HOLOCAUST GENOCIDE AND MASS KILLINGS

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Jurgen Brauer*

Hull College of Business, Georgia Regents University and Chulalongkorn University

Raul Caruso

Institute of Economic Policy, Catholic University of the Sacred Heart

Abstract

We present two schemata with which to parse cases of genocide and mass killings (GMK) for economic content. The first schema enumerates several ways in which economic aspects affect and are affected by episodes of GMK and roams across various economic concepts and theories that might be applied to case material. The second schema takes one specific economic theoretical framework, the theory of constrained optimization, and suggests how to employ it systematically to examine (1) perpetrators', victims', and third parties' objectives, (2) the cost of perpetration, escape, or intervention, and (3) the resources available to pay (or fail to pay) these costs. In addition, since much of the GMK literature deals with cases following the 1948 codification of the word genocide in international law, we illustrate the economic concepts and theories with pre-Holocaust examples. The intent of the chapter is to speak to both, economists and genocide scholars. (146 words)

Keywords: Genocide; mass killing; case studies; economics; perpetrators; victims; third parties; preferences; costs; resources.

Jel Codes: D74; H56; N40

* corresponding author Jurgen Brauer email: jbrauer@gru.edu; The authors acknowledge helpful comments made by Charles H. Anderton and anonymous reviewers. The usual disclaimer, that no one but the authors are responsible for any remaining shortcomings, applies.

1. INTRODUCTION

The word genocide was coined in print in 1944 (Lemkin, 1944) and codified in international law in the UN Genocide Convention of 9 December 1948 (coming into force on 12 January 1951). The Convention defines genocide as “any of the following acts committed with the intent to destroy, in whole or in part, a national, ethnical, racial, or religious group, as such: (a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group; (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) Imposing measures intended to prevent births within the group; (e) Forcibly transferring children of the group to another group.”

Samuel Totten and William Parsons (2013) point out in the very title of their book, *Centuries of Genocide*, that once the idea of a new concept is born, one recognizes that it may apply to eras preceding its invention and naming. Still, for various reasons much of the scholarly literature on genocide and other mass killings (GMK) concerns itself with post-world war two instances of GMK. Indeed, the book in which this chapter appears reflects this scholarly preference in that most of its cases and applications are of post-1948 vintage (e.g., Colombia, Indonesia, Rwanda, and Vietnam). In contrast, this chapter applies economic ideas to pre-Holocaust GMK cases, in fact to the five pre-Holocaust cases included in the Totten and Parsons book (4th edition, 2013). These are the cases of the Yana people in California, the Aborigines peoples of Australia, the Herero and Nama peoples in then-German South-West Africa, Armenians in the Ottoman Empire, and Ukrainians under Stalin.

The intent of this chapter is to apply to specific case material two nonspecific economic schemata recently proposed in the GMK literature. The first schema, by Anderton (2014), lays out six “key interdependencies” (p. 116) said to link economics and genocide. First, conflict, including genocidal conflict, typically is a deliberate choice made against feasible alternative choices that also could have been made.

The study of the conditions under which choices are made, what are the consequences of such choices, and how choices may be “guided” by tweaking the conditions in laboratory or field experiments, are a staple of economics research. Second, prevailing economic conditions—such as poverty, low-growth economic performance, and property right disputes—can affect the risk, intensity, contagion, termination, and recurrence of genocidal conflict. Third, genocidal conflict, once started, affects the current performance of an economy, e.g., in diverting and destroying economic resources, in disrupting trade, in displacing people and disrupting the labor market, and in diminishing prospects for post-violence recovery and redevelopment of the economy. Fourth, genocidal conflict requires a “business model,” i.e., an organizational setup, whereby for example labor is recruited and trained, weapons and other deadly materials are acquired, a command and control system is built, and logistics and supply-chains are established. These topics fall within such sub-fields as managerial economics, business economics, and the economics of industrial organization. Fifth, genocidal conflict can be a mode of wealth appropriation. Examples include the accumulation of territories that contain valuable natural resources or the capture of capital goods and financial assets, and even of cultural goods (e.g., through artefact looting) and of victimized peoples themselves (e.g., for forced labor). Finally, sixth, genocidal violence deprives victims of the security of their property and person. But security, along with health and education, is a fundamental economic good without which sustained economic productivity and prosperity cannot be expected.

Section 2 of this chapter briefly puts each of these six “interdependencies” to a test with examples drawn from the pre-Holocaust cases narrated in Totten and Parsons (2013). The hope is twofold: first, that genocide scholars may perhaps more systematically perceive, recognize, and study the economic “field” and economic “techniques” of genocide that Raphael Lemkin (1944) himself already spelled out and, second, that economists and economic historians may feel encouraged to delve more deeply into specific pre-Holocaust cases and to elaborate on them through an economic lens. (Lemkin’s eight “fields” of genocide are the political, social, cultural,

economic, biological, physical, religious, and moral fields.)

The second schema, by Brauer and Anderton (2014), takes one economic theory—constrained optimization theory (COT)—and illustratively applies it in Section 3 to pre-Holocaust examples. This is an elaboration of Anderton’s (2014) first interdependency—genocide as a deliberate choice made as against feasible non-genocidal alternatives. The general idea is that perpetrators, victims, and third parties (internal and external bystanders) each have specific objectives (respectively, to victimize, to escape victimization, and whether to intervene or not) and that the feasible alternatives from which each chooses one specific course of action are constrained by a limited pool of resources available to pay the cost of the action (victimization, escape, or intervention). For perpetrators, victims, and third parties, respectively, Tables A1A, A1B, and A1C in the Appendix are abstracted from Brauer and Anderton (2014). They lay out in some detail who forms preferences (objectives) over genocide (or escape or intervention), what these preferences entail, and why, when, where, and how they are formed. The tables also lay out detailed, but not case-specific, ideas in regard to the monetary and nonmonetary resources available to pay the monetary and nonmonetary costs of perpetrating, escaping, or intervening in genocide. They also make points in regard to factors that may enhance the productivity of conducting, escaping, or intervening in genocide.

TABLES A1A, A1B, A1C ABOUT HERE

Again, the hope is twofold. We hope that genocide scholars will appreciate the illustrative re-reading of pre-Holocaust cases in light of the idea that specific genocidal choices made are the direct outcome of resource and cost *constraints* and that, had the constraints been less binding (for perpetrators, victims, or potential interveners), a non-genocidal choice may well have been made. Re-reading genocide

history through the lens of optimization given monetary and nonmonetary resource and cost constraints may help to more deeply or, at any rate, differently understand GMK cases. Likewise, for economists, the illustrative applications of COT in this chapter may encourage them to more deeply delve into particular aspects of genocide decisionmaking, not just in post-Holocaust cases as the literature already does but also in pre-Holocaust cases and thus deepen the theoretical and empirical basis of applying (one) economic theory to a larger set of cases of GMK. Section 4 concludes the chapter.

2. KEY INTERDEPENDENCIES

Genocidal conflict as a deliberate choice. Genocide rarely appears as a fully formed choice. Typically, it is preceded by a number of signposts. In a famous briefing paper prepared for U.S. government officials, Gregory Stanton (1996) writes of eight stages of genocide: “The first stages precede later stages, but continue to operate throughout the genocidal process. Each stage reinforces the others. A strategy to prevent genocide should attack each stage, each process. The eight stages of genocide are classification, symbolization, [discrimination], dehumanization, organization, polarization, preparation, [persecution], extermination, and denial.” (The items in square brackets—discrimination and persecution—were added in a later rendition to become “The 10 Stages of Genocide.”) But, in time, the choice of genocide is made. For each of the cases of the Yana, Aborigines, Herero and Nama, Armenians, and Ukrainians, the literature summarized in the Totten and Parsons (2013) case collection leaves no doubt about genocide eventually having been *chosen* by perpetrators as a deliberate objective as against feasible, non-genocidal alternatives of dealing with unwanted out-groups.

For example, the Yana were a population of some 3,000 Native Americans, living at the northern end of California’s Central Valley. Their eventual extermination was perfect in the sense that at the beginning of the twentieth century only one Yana survivor was reported to be alive and the group’s reproduction therefore no longer possible (also see, e.g., Kugler, ch. 11, and von Joeden-Forgey, ch. 12, in this

volume). According to the case author, Ben Madley, in the wake of the Californian gold rush from the late 1840s to the 1880s, the “motives driving immigrants to destroy the Yana changed over time, as did the organization of their killing operations” (p. 18). In the end, however, the initial colonizers as well as later immigrants wanted to establish an “Indian-free environment” (p. 24) to appropriate land-based natural resources for “ranching, hunting, and mining” (p. 22). On occasion, their purpose might have appeared to be defensive and retaliatory because of Indian raids against settlers but, in time, the goal became Yana elimination for its own sake. This was government tolerated and government co-financed. For instance, in support of the state’s first civilian governor, Peter H. Burnett, who declared that “a war of extermination will continue to be waged ... until the Indian race becomes extinct” (p. 20)—and one can hardly be clearer about the deliberateness of the intent and the genocidal choice made—California’s legislators appropriated US\$500,000 and US\$600,000 dollars in 1851 and 1852, respectively, to fund state-sanctioned Indian-hunting campaigns staffed by militia volunteers. This gained momentum in 1858-1859 when colonizers bent on institutionalized killings received support from then-Governor John B. Weller. Again, a state-supported militia, led by Adjutant General William C. Kibbe, was created. Money was raised to hire men literally to hunt Indians. Kibbe claimed the sum of US\$69,486 for the expedition. Indian-hunters were compensated with an amount of cash paid per Indian scalp. The incentive structure proved important and personal greed partly motivated and reinforced the campaign against the Yana. “Ultimately,” writes Madley, “the drive to destroy the Yana became an ideology of total annihilation” (p. 44). The choice no longer was merely to confiscate Indian-held resources or to enslave Indians as laborers. The choice made was to kill to the point of group extermination. Section 3 elaborates on the cost and resource constraints that shaped this, and other genocide, choices. That genocide becomes a choice is no longer in dispute among genocide scholars. But the conditions that help shape the

making of this choice are perhaps less-well clearly examined and understood. Section 3 addresses this issue in more detail as do a number of more technical and formal chapters in this book, including Anderton and Brauer (2015).

Economic conditions affecting genocidal conflict. Between 1904 and 1907 imperial Germany waged a war against the Herero population that had revolted against colonial rule in German South-West Africa (now Namibia). The chapter author in Totten and Parsons (2013), Dominik Schaller, writes that initially aimed solely against Herero, the war eventually embroiled Nama people as well. The latter, after at first supporting the settlers, began guerrilla operations against the German army because of a growing fear that commander's Lothar von Trotha's racist and explicit extermination policy would be applied to Nama as well as to Herero (p. 90). By the end of the war about 60,000 Herero and 10,000 Nama had died (p. 90). Long before the German-Herero war and subsequent genocide commenced, colonists had been "waiting for the elimination of the Africans as autonomous actors [but] were well aware that their military power and colonial infrastructure had not been sufficient. Therefore, settlers were afraid that a major African uprising could hamper the positive political and economic development in the colony" (pp. 90-91). Uprisings did happen, with the one on 12 January 1904 generally cited as the beginning of war between Herero and the about 5,000 Germans, English, and Boer colonists (p. 94).

At the turn of the century, Herero numbered about 80,000 people in Central Namibia. Traditionally pastoralists, by the mid-1800s they had become the region's predominant cattle herders, breeders, and traders. The Nama, numbering about 20,000, lived mostly in South Namibia. Also a cattle-people, they traded mostly with the Cape Colony further to the south. Northern Namibia, not much accessed by Europeans, was inhabited by about 450,000 Ovambo people who lived on fishing, agriculture, and trade with Ovambo's to the north, in Portuguese Angola. Schaller describes the indigenous societies as "strong and independent and ... not at all ready to give up their self-sustaining economies" (p. 93). However, a cattle disease (*Rinderpest*) arrived in 1897 and resulted in a 90 percent loss of cattle. While the

settlers managed to inoculate their own herds, for the indigenous people loss of cattle meant loss of nutrition. Subsequent enfeeblement then made them vulnerable to malaria, of which about 10,000 Herero died. Bereft of labor and cattle, many survivors found themselves forced to sell their labor services to the settlers. Economically weakened tribal chiefs sold large swaths of tribal land to the settlers, in addition to huge land holdings they had previously sold in exchange for recognition as tribal leaders by settler governments (especially Germany).

Overall, the sudden cattle deprivation shifted the economic balance between colonizers and natives dramatically. The purpose of the Herero revolt was to forestall full economic expropriation (dispossession of all land and property). Once German policy became an extermination policy in a later phase of the war, natives' objectives shifted to pure physical survival. Economic geography made things worse in that Herero could flee only into "the waterless Omaheke desert where they had to face death from starvation and exhaustion ... The paths through the desert to British Bechuanaland were known to the Herero as traditional trade routes [but] the capacity of the water holes was not sufficient to ensure the survival of all the refugees" (pp. 90-91). Clearly, economic conditions affect the onset, course, and termination of genocide.

Genocidal conflict affects the economy. If economic conditions affect the origin and conduct of genocide, the converse holds as well: Genocide affects the economy. The genocide of Australia's indigenous people—Aborigines and Torres Strait Islanders—took place approximately between the late 1700s and the 1980s, an unusually extensive period of about 200 years. Australia's federal government did not formally apologize until the year 2008. Aborigines are not a single people but an artificial identifier covering individuals of many clans. (On identify and economics, see Akerlof and Kranton, 2011.) In terms of the UN Genocide Convention, it is undisputed that an attempt was made to eliminate Aborigines as distinct peoples: Many were killed outright; serious physical and mental harm was inflicted with

deliberation; conditions of life were calculated to destroy its members; children of pure and mixed Aborigines descent were forcibly transferred; and measures were taken to prevent births within the groups. In addition, writes chapter author Colin Tatz in Totten and Parsons (2013), there was conspiracy, incitement, attempt, and complicity to commit genocide, all orchestrated as a matter of government policy. In all, by 1911 Aborigines populations had declined from 500,000 or more individuals in 1788 to a low of between 30,000 to 80,000 people. (According to the Australian Bureau of Statistics, the populations recovered to 670,000 by mid-2011.)

In the initial phase of the genocide—the first one hundred years or so—its effect on the developing economy of the various Australian colonies was to clear land for settlement. (Australia’s six colonies federated into an independent nation-state only on 1 January 1901.) At the time of settlement, in the 1700s, “[t]he land was treated as a wasteland but for flora and fauna, of which the ‘natives’ were deemed a part” (p. 56). Land was regarded as *terra nullius*—belonging to no one and therefore free for the taking, a doctrine not overturned until a High Court decision in 1992 recognized Aboriginal title to traditional land ownership. Policy with regard to “natives” was colony- or state-based until 1967 when a nationwide referendum resulted in the transfer of relevant powers to the federal government.

The effect of the genocide on Aborigines communities was the opposite to that on the settlers’ economy. As settlers expanded north and south of Botany Bay (today’s Sydney) and inland to Central and then Western Australia, Aborigines were herded into remote reservations, cattle stations, and church missions, most “splendidly secluded,” “foolishly selected,” “almost inaccessible domains [that] were not Aboriginal choices or places of their natural habitat” (p. 64). “Quintessentially nomadic hunter-gatherers became sedentary and stationary” (p. 64). Without title to land, nor any other legal protection, their numbers and economy collapsed. Where “actual remuneration [for work] was paid, these monies went into state-run trust funds, much of which disappeared” (p. 64). Nor could Aborigines workers “join essentially racist trade unions” (p. 64). The examples can be multiplied and, as in the Yana and South-West African cases, show an unambiguous bifurcated effect

favoring the settlers' economy while decimating that of the indigenous peoples.

The "business model" of genocide. Between 1915 and 1923, in the final phase of the dissolution of the Ottoman empire, its Armenian population suffered a genocide. According to chapter author Rouben Adalian in Totten and Parsons (2013), the number of victims is estimated at 1.5 million people. The Armenian minority in Turkey constituted an anomaly: Over the span of more than 14 centuries it never assimilated and consistently kept its Christian identity and culture. Throughout the late 1800s, Armenians already had been the target of episodic massacres from military and paramilitary forces. By 1915, the Ottoman economy had experienced a steady decline of its powers and economy. Average GDP per capita was less than one-third of the European average and the economy mostly at subsistence levels in rural areas. The empire, buffeted by Russian, Austro-Hungarian, British, and other interests, did not succeed to keep pace and modernize. Its imperial wings were clipped as its soldiers lost numerous battles and territories in Southeastern Europe, Western Asia, and North Africa. The resulting internal turmoil led Ottoman authorities under the initially somewhat liberal and tolerant Committee of Union and Progress (CUP) to withdraw into Turkish nationalism, militarization, Islamification, centralization, and consolidation of power, at the expense of non-Muslim and non-Turkish populations.

Seeking to effect a far-reaching elimination of minorities, guarantee itself full control of territory, and to confiscate Armenian properties, the state built up a secret police of 40,000 people. Details are provided in Section 3 but, in brief, many agencies and ministries of the Ottoman state were involved in the implementation of the genocide. A secret agency (the "Special Organization"), committed to mass murder, was created. The extermination plan involved, in large part, forced deportations to Syria and Mesopotamia which, by design, then reduced to a simple process: Escorted columns of deportees, mostly women, children, the elderly, and infirm, were decimated through robbery, exposure, privation, starvation, or direct

attack, on their way to, or in, the Syrian desert. Illustration 4 in Section 3 will expand on this, especially in regard to how the availability of Ottoman resources helped shape the specific form that the genocide took.

Genocide as wealth appropriation. Stalin's manufactured famine in east-central Ukraine and the North Caucasus in 1932/3 resulted in perhaps 5 to 7 million victims. At the time, the Great Depression badly affected the economies of the entire world. James Mace, author of the Ukraine chapter in Totten and Parsons (2013), writes that the USSR "seized with unprecedented force and thoroughness the 1932 crop and food-stuffs from the agricultural population" (p. 157). Ukrainian farms were forcibly collectivized, food production first requisitioned, then simply confiscated and siphoned off. But wealth appropriation goes beyond Lemkin's narrowly-understood economic "field," such as "including forced impoverishment, expelling people from businesses and occupations, manipulations of trade and finance, appropriation of assets and enslavement" (Anderton, 2014, p. 125). Wealth appropriation in a broader sense refers to the taking of any and all resources at the victims' disposal, economic or otherwise, and thus covers all of Lemkin's eight domains over which genocide is carried out (the political, social, cultural, [narrowly] economic, biological, physical, religious, and moral fields). For example, Ukrainian victims, mostly a peasantry, had an "incomplete social structure, [lacked their] own ruling class," and had no independent political clout (p. 158). As for others in imperial Russia, Ukrainians social and cultural assets already had been severely challenged (p. 158). With the collapse of the empire, in 1917, Russia's new leaders sought to unify the country under the ideological banner of a progressive urban proletariat to be set against rural, traditionalist interests. A new consciousness was to be established, neither Russian nor Ukrainian, but based on a self-understanding as an international proletariat united against exploitative capitalists. The rural and urban proletariat of the various nations of the USSR were to unite against land-owning rentiers. In a way, *all* peoples, and the wealth inherent in their ethnic, linguistic, cultural, and other forms of diversity, were to be appropriated and abolished as separately recognizable entities and cultures. They were to be reborn

as a new nation of proletarian workers and peasants.

This notion of “national nihilism” (p. 161) was based, in part, on Rosa Luxemburg’s writings (p. 161) and on Joseph Stalin’s own article on “Marxism and the National Question,” penned in 1912-1913, in which he had criticized the idea of permitting any cultural-national autonomy to persist. But under Lenin’s initial leadership of the USSR, following the October Revolution of 1917, a pragmatic course was chosen in that non-Russian nations and their local, rural mores were recognized and accommodated. Lenin’s New Economic Policy (NEP) of 1921 thus permitted for example rural, private markets to persist, one avenue by which to help integrate diverse populations into the new Soviet workers’ and peasants’ state (p. 159). In 1923, in part to deal with “continued national resistance” to integration, Lenin fostered “indignization, which attempted to give non-Russian Soviet regimes a veneer of national legitimacy by promoting the spread of the local language and culture in the cities, recruiting local people into the regime, ordering Russian officials to learn the local language, and fostering a broad range of cultural activities” (p. 159; also see p. 161). Following Lenin’s death in 1924 and the subsequent power struggle, however, Stalin replaced Lenin’s NEP in 1927 with a program of forced collectivization of agriculture and pursued a push toward urban-based industrialization (the Revolution from Above). This required an increasingly simplified ideology wherein a stubborn petty bourgeois class of landowners (the *kulaks*) was said to exploit other types of farm-workers and accused of withholding food supplies from the remainder of the USSR, and combined with Stalin’s definition of a nation: “A nation is a historically constituted, stable community of people, formed on the basis of a common language, territory, economic life, and psychological make-up manifested in a common culture ... It must be emphasized that none of the above characteristics taken separately is sufficient to define a nation. More than that, it is sufficient for a single one of these characteristics to be

lacking and the nation ceases to be a nation.”¹ This definition proved to be the basis for eliminating non-Russian national identities. Wealth appropriation in this broad sense—as the total appropriation of any and all resources that give rise to sustainable cultures, economies, and polities—is astonishingly far-reaching. Appropriation also is an eminently economic topic.

Genocide as deprivation of security as a fundamental service. Alongside health and education, the physical security of one’s property, person, family, and community is fundamental to a well-ordered society. Depriving a people of the protection of the law and giving immunity to perpetrators—or even to incentivize them—creates insecurity. For example, under Stalin an internal passport system was introduced that limited people’s freedom of movement. Escape routes were blocked. In Australia, permission for leave government created Aborigines reserves needed to be sought from the colonial authorities, usually to work on cattle stations but without any labor rights, not even to the legal minimum wage. Legally defined as “under legal guardianship, wards of the state, minors in law, specifically denied civil rights, social welfare entitlements, and most of the benefits inherent and explicit in the rule of law” (p. 64), Aborigines neither could marry nor legally engage in sexual intercourse with non-Aborigines. Nor could they vote in state or federal elections until the 1960s. The point was seclusion, privation, and—with the removal of their children—genocide (pp. 64-65). The Yana, in California, had no protection of their property or their lives under the law and the literal hunting of Yana was financially incentivized by the governments of California and the federal government of the United States. The Herero and Nama, in South-West Africa, “were dispossessed and all their land was officially seized by the colonial power ... All Africans were compelled to compulsory work” and colonial decrees “restricted the Africans’ freedom of movement gravely and forced them to carry a tiny identity badge around the neck” (p. 96). In Ottoman Turkey, the state was “withholding from [Armenians] the protection of the state” (p. 119). The examples can be

1. Quote taken from <http://www.marxists.org/reference/archive/stalin/works/1913/03a.htm#s1> [accessed 30 September 2014].

multiplied at will. Under conditions of pervasive insecurity, a part of the work force is converted from an economic asset to an economic liability as their productivity and economic contribution to the country is reduced. This necessarily is a topic for economics and economists.

In sum, even a cursory reading of the pre-Holocaust literature easily yields ample illustrations for each of Anderton's (2014) claimed "interdependencies" between economics and genocide. His contention that economic considerations may offer valuable additional insights into the process of genocide seems quite on the mark and may well be worth pursuing in greater detail in separate research efforts.

3. CONSTRAINED OPTIMIZATION THEORY

An example of a formal (i.e., mathematics-based) application of constrained optimization theory (COT) to cases of genocide and mass killings (GMK) is provided in Anderton and Brauer (2015). The theory makes specific predictions and raises specific policy issues for would-be interveners to consider. A nonformal statement of COT is developed in Brauer and Anderton (2014) for which this section in this chapter provides several case illustrations drawn from the pre-Holocaust era. In short, the hardly disputable idea is that to achieve a desired end, even that of genocide, perpetrators necessarily must avail themselves of resources to pay the cost of achieving their objective. Genocide requires a set of actions and these actions incur costs to be defrayed from a pool of resources. Logically, there are two dimensions to thinking about genocide in terms of COT: If the *general* objective is simply the removal of an undesired out-group, then their killing as a *specific* act is but one among a number of alternative options to achieve the general objective. For example, the relocation of the out-group to territories of other states is, in principle, an alternative option. But even if killing itself is the objective, it would still be true that different forms of killing (shooting, gassing, starving, and so on) impose different draws on the perpetrators' resource base. In either case, it is a safe

presumption that perpetrators are not as wasteful with their resources as they are with their intended victims' lives. The theory thus predicts that as cost and resource constraints—or changes in cost and resource constraints—become binding, they seemingly force the hand of perpetrators as if to direct them, given a specific objective they wish to achieve, into one form of genocide rather than another. Perpetrators are hypothesized to attempt to “optimize” the destruction, subject to cost and resource constraints. (Of course, the objective itself can change as well.)

COT does not justify perpetrators' objectives. The point is not to understand the beliefs upon which perpetrators act. Instead, the intent is to understand the calculus of the act itself and of how (changes in) cost and resource constraints influence the act about to be undertaken. Note that COT reasoning also applies to victims who attempt to escape victimization as well as to potential third-party interveners since they, too, act under cost and resource constraints. One conclusion from the COT perspective is that genocide, and mass killings more generally, may be viewed, analytically, as a life-or-death contest over costs and the resources to defray them. If the cost is too high or the resource base too small, perpetrators may remain hateful but have no means to act on their beliefs, however come by. Likewise, if the cost is too high or the resource base too small, victims cannot hope to escape victimization and third parties cannot intervene, whatever else they may feel, think, or say, in private or in public. Also note that costs and resources include *nonmonetary* costs and resources and include the entire panoply of feelings, perceptions, images, and attitudes on the basis of which humans form, maintain, or change the objectives they wish to pursue (see *Illustration 2* below; also see Boulding, 1956; Stigler and Becker, 1977).

A total of 45 possible combinations can be considered: Five pre-Holocaust cases times three parties, namely, perpetrators (P), victims (V), and third parties (T), times three analytical items, preferences or objectives (O), costs (C) and resources (R). For example, for the Yana case alone, one could examine the combinations OP, OV, OT, CP, CV, CT, and RP, RV, and RT. The combinations are multiplied when considering how each combination may affect the productivity of each party or when

considering interactions, feedback effects, and path dependencies among preferences, costs, and resources. For reasons of space limitations, only five combinations are chosen in the following illustrations but hints at interdependencies are provided.

Illustration 1 (Yana): Ben Madley, in his chapter on the Yana in Totten and Parsons (2013), succinctly summarizes the victims' alternatives: "To protect themselves Yana people had three choices. They could seek protection from the newcomers (by becoming servants, concubines, wives, and laborers), fight them, or retreat into the mountains. All three options were hazardous" (pp. 19-20). Since Native Americans had virtually no rights under California law, living among colonizers and immigrants could be (and was) capricious. Not having legal recourse translates into not having the resource of law and its enforcement. Moreover, individual-by-individual "integration" would, in any case, dilute the group as a recognizable, separate entity with which individuals born to the group could identify. Regarding the second option, to hope to engage, fight, and win against the settlers' superior numbers and firepower with the bows and arrows at the Yana's disposal implied an implausibly high death-toll cost. The remaining option was withdrawal into the surrounding mountains, by no means a pleasant choice, but a choice nonetheless—in fact, a *constrained* choice in that the alternatives were even worse, precisely in the optimization meaning of COT, to "make the best of a situation, given the circumstances." Had they then been left alone, the Yana might have adapted but "immigrants made mountain life increasingly difficult" (p. 20). Ranching, hunting, and mining (by despoiling rivers and the salmon fish stock upon which Yana relied) depleted the resource base by which to survive. Instead of open fighting, Yana resorted to raids, robbery, and arson of settlers' homesteads (p. 26). In an action-reaction pattern, or so Madley describes the sequence of events, settlers responded in kind, raiding Indian camps in turn. Their numbers, firepower, recourse to state financing (and, later, to federal financing, p. 32), as well as

immunity from the law for abusing or killing Indians, overwhelmed the Yana. During one of General Kibbe's Indian-hunting campaigns, he endeavored to keep Yana on the run, hemmed them in certain locations to deny them opportunity and time "to gather acorns or seeds sufficient for winter, or to fish." He thus prepared them for death by starvation lest they surrendered to accept forced relocation onto reservations, "an agonizing choice" (p. 31)—again precisely the point COT makes. True, fleeing ever further from familiar hunting, harvesting, and fishing grounds and abandoning camps and food stores did imply that the Yana had increasingly "little to lose" (p. 35), but they also had even less to fight with to effectively oppose their own destruction. Madley rightly points out that "the state of California, the U.S. government, or immigrant communities could have negotiated with the Yana and avoided genocide" and that "diplomacy might have generated a very different outcome" (p. 45). But by then both the mind set and the incentive structure (e.g., cash for scalps and legal immunity) made that unlikely, especially since a good part of the final phase of the Californian annihilation campaigns (1860-1872) occurred while the East and South of the country were embroiled in the U.S. civil war (1861-1865) and its aftermath. The case well illustrates how victims' resources constrain the set of feasible alternatives left to them.

Illustration 2 (Aborigines): If the Yana illustration focuses on the interplay of cost and resource constraints for the victims, the Aborigines illustration centers on third party preferences—albeit it with a twist. While in the genocide's first phase, many individuals in Australia felt uninhibited to abuse Aborigines at will, for others this did cause misgivings and a movement to protect victims arose such that "the colony of Queensland was pressed to introduce the world's first statute to protect a people from genocide: The Aborigines Protection and Restriction of the Sale of Opium Act of 1897" (p. 58). With it came state-concerted efforts at segregation into mission schools, welfare institutions, land reserves, and institutionalized child removals. Given Victorian-era mores, this may have been well-intended. A third party—the colonies' educated, "good-hearted" members of society of prominence and rank, especially in government and church—gradually

asserted more political power over dealing with Australia's Aborigines populations. A preference change took place but, according to Colin Tatz' description in Totten and Parsons (2013), this did not change the fact that the (perhaps unwitting) objective remained genocide. What resulted was the conversion of seemingly random, more or less spontaneous acts of disorderly genocide into an ordered, i.e., institutionalized, genocide. Aborigines peoples and cultures still were to be eliminated as distinct, identifiable entities. One group of perpetrators replaced another.

For instance, "key state bureaucrats" held a national summit in Canberra in 1937. One of its leaders proposed a three-part plan: "full blood" Aborigines were to be segregated into reserves; mixed children removed from their mothers; and marriage control be orchestrated such that "quarter- and half-blood Aboriginal maidens would marry into the white community. It would then be possible to 'eventually forget that there were ever any Aborigines in Australia'" (p. 62). In another example, until 1939, in the state of New South Wales (which includes the city of Sydney) the stated, official reason for child removal from Aborigines parents—handwritten into the record books—frequently read "For being Aboriginal" (p. 63). (Thereafter, at least a removal hearing before a magistrate was required.) While lives were saved (people not killed), ironically child removal "destroyed much of the fabric of Aboriginal societies" (p. 65). The "protection-segregation era" (p. 55), which lasted into the 1980s, thus raises the point that the UN Genocide Convention's "intent to destroy" need not be restricted to bad faith or intent (*male fides*). Even well-meaning—"good"—intent can lead to genocide and is a punishable offense. The prevalence of a *male fides* interpretation of the Convention perhaps explains why child removals in particular continued on a grand scale even after Australia ratified, in 1949, the UN Genocide Convention.

There is an interesting interaction that emerges here between perpetrators' mind set and nonmonetary costs and resources. Once perpetrators' *mental*,

perceptual constraint changed in the 1970s and 1980s, once their image of themselves and of their victims changed, genocidal actions directed against Aborigines peoples ceased rapidly. In the South African context, Kleinschmidt (1972) refers to this as the need for “white liberation” from their own mind set. Akin to Johan Galtung’s concepts of positive peace and negative peace, this might be viewed as a “positive liberation” instead of a “negative liberation,” the latter restraining acts of genocide but leaving the intent unchanged, the former changing the intent of the perpetrators. The point refers the *cost* of preference formation and, more specifically, the cost of *changing* habitual, or habituated, lines of thought and leads to a discussion, can pursued here, of the role of upbringing, neurodevelopment, peer effects, socialization, education, and conformity versus resistance.

Illustration 3 (Herero and Nama): In Section 2, the story of how economic conditions affect genocide was told mainly from the Herero and Nama point of view. The story is continued here from the settlers’ point of view and as an illustration of how binding cost and resource constraints affect the initiation and conduct of genocide. Namibia’s climate was harsh, transportation and communication of the day (both to as well as within Namibia) were poor, dispersed, and difficult, and while Chancellor Bismarck’s government in Berlin did want colonies, it was not keen to spend great sums on them. Prior to 1904, a divide-and-rule policy that played tribal leaders in Namibia against each other permitted the acquisition of vast tracts of land even as the number of settlers was small, only about 4 percent of the Central and South Namibian populations. When war broke out, Herero at first prevailed. It took nearly half a year for imperial Germany to send 14,000 troops and start its annihilationist campaign under von Trotta’s command. As a military man, he sought a military sort of victory. “The Hereros are no longer German subjects,” he wrote, and continued that “all the Hereros must leave the land. If the people do not do this, then I will force them to do it with the great guns. Any Herero found within the German borders with or without a gun, with or without cattle, will be shot” (quoted from p. 89 of Schaller’s account in Totten and Parsons, 2013). But the

campaign was not cheap. In monetary terms, the apparently vast sum of 585 million Reichsmark was spent on troops, weapons, and logistics, and almost 2,000 of von Trotta's troops died from epidemics (p. 90). Because of this monetary and manpower cost constraint, von Trotta changed tactics, forcing people to flee into the desert and perish there. Yet the settlers were not in favor of von Trotta's policy of killing. What concerned them, instead, was their quest for forced labor so as to lower their labor costs and to improve the fortunes of the settler economy. Both private and public German employers increasingly relied on forced labor to address a labor supply shortage. Consequently, settlers contested von Trotta's extermination order and lobbied the Kaiser's government in Berlin to order the establishment of concentration camps to corral the forced laborers. These were in fact ordered by then-Chancellor von Bülow and built in the second phase of the war. Conditions were harsh, with a death rate of 44 percent between 1905 and 1907, as the German army command itself reported (percentage calculated from figures given on p. 95). In arguing why von Trotta's killing policy needed to stop, the German commissioner of settler affairs in South-West Africa, Paul Rohrback, commented in his 1953 biography that "South-West Africa with natives was of much more value ... than without" (p. 90). Cost and resource considerations (constraints) influenced the conduct of the genocide.

In a third phase, following the war itself, captives were released into a political, economic, and cultural vacuum. The colonial authorities instituted a policy of tribal de-identification and proletarian re-identification was pursued, a cultural genocide and repurposing of human beings for economic exploitation. In a 1907 decree, freedom of movement was severely restricted for indigenous peoples and the wearing of identity tags made mandatory. Additionally, settlers demanded that all indigenous peoples be tattooed (p. 96). Still fearing uprisings, a deportation policy was considered to ship victims to the then-German colonies of Cameroon and Papua New Guinea but the outbreak of world war one prevented its large-scale

implementation (p. 96).

Illustration 4 (Armenians): The fourth illustration focuses on the resources a perpetrator can bring to bear on the victims. As mentioned, the Ottoman empire “withdrew the protection of the state” from Armenian subjects: Its cabinet made the decisions, charged its Ministries of the Interior and of War with overseeing the destruction, and they in turn “instructed local authorities on procedure, the timing of deportation, and the routing of the convoys of exiles” (p. 126). Parliament “enacted legislation legalizing the decisions of the cabinet” (p. 126). The Turkish leaders had “at their disposal immense resources of power and an arsenal of formal and informal instruments of coercion” (p. 118). And “at every level of the operation against the Armenians, party [i.e., CUP] functionaries relayed, received, and enforced the orders of the government” (p. 119). The primary prong of attack consisted of deportation orders, implemented by removal by train, or by horse-drawn wagon, by mules, or—for most victims—by walking southeast from the Anatolian plain or either south from the Black Sea or southwest from Armenia, both mountainous regions, toward the Syrian desert. The government made “no provisions” to supply food or overnight shelter and “only one-quarter of all deportees survived the hundreds of miles and weeks of walking” (p. 120). Local governments assisted in the deliberate neglect. Marauders, including Kurds (another, but Muslim, minority), preyed on refugee caravans, looting, raping, kidnapping, and killing without penalty. Those who survived all the way to Syria died there from the day’s heat or night’s cold or were assaulted by “sword and bayonet” by the Special Organization’s killing units (p. 120). Rouben Adalian, the author of the Armenia chapter in Totten and Parsons (2013), writes that the “deportations were not intended to be an orderly relocation process” (p. 120). Our alternative reading says that the genocide was in fact highly orderly in that government provided for the underlying structure which was “conceived with secrecy and deliberation and implemented with organization and efficiency” (p. 119). For example, joining Germany late in 1914 as a world war one axis power, Turkey hoped to regain territories it had lost in the Russo-Turkish war in the late 1870s. Fearing Armenian

collaboration with (co-religionist) Russians, or so Enver Pasha, the Minister of War argued, able-bodied Armenian men were “conscripted into the Turkish armies, [then] disarmed, forced into labor battalions [for logistics support], and either worked to death or outright murdered” (pp. 120-121). Older males “were summoned by the government and ordered to prepare themselves for removal from their places of habitation” (p. 121). They submitted unwittingly, apparently not expecting subsequent imprisonment, torture, and mass executions. To undermine resistance, “prominent leaders were specially selected for swift excision from their communities” (p. 121), about 250 of them in an especially coordinated action in Constantinople on the night of 23 to 24 April 1915, now often taken as the nominal date of the beginning of the genocide against Armenians. Women, children, the elderly, and the infirm went on the death marches to Syria, herded along by soldiers (p. 126). Extermination camps were built on today’s borders with Iraq and Syria. The killings in Syria were carried out by killing units. But resources were not infinite. For example, bullets were spared for the war effort by forming a Special Organization of convicted criminals to kill with “scimitars and daggers” (p. 127). Armenians’ “abandoned goods” were confiscated and auctioned off, profiting CUP officials and as a “means that rewarded its supporters” (p. 127). Still, set against the resources of the Ottoman state as a whole, neither Armenians themselves nor third parties—embroiled as they were in world war one—could or did offer any effective counter-force.

Illustration 5 (Ukraine): This illustration highlights a few aspects of the impossibly high cost to victims of escaping Stalin’s program of forced starvation. Since James Mace’s chapter in Totten and Parsons (2013) is written primarily from the point of view of perpetrators’ actions, relatively little is said that directly pertains to the monetary or nonmonetary costs victims’ faced to resist or to escape. (Little is mentioned of their resources, either, but both faults are rectified to some degree in the 20 pages of eyewitness accounts appended to the chapter.) But from

the actions of the perpetrators one can infer a few things about the potential cost of attempting escape. The Ukrainian victims were primarily rural populations with an underdeveloped class of intellectuals who might have articulated the experiences, feelings, and thoughts of their compatriots. The famine “corresponded in time with a reversal of official policies that had hitherto permitted significant self-expression of the USSR’s non-Russian nations.” Now, “non-Russian national self-assertion was labeled bourgeois nationalism and suppressed” (p. 157). Freedom of movement was eventually curtailed with the introduction of an internal passport system (pp. 166, 172). Forced collectivization of farms was introduced, using as enforcers city-based workers who were notionally integrated into national, pan-Soviet aspirations. “Workers were sent from factories, and sometimes a factory would be named ‘patron’ of a given number of villages; that is, the factory would be assigned villages in which to enforce collectivization and seize foods” (pp. 162-163). Accompanied by State Political Directorate (GPU) forces and hunting dogs, these “tow brigades” would harass, manhandle, torture, and kill peasants in order to search for, find, and confiscate food. Horses, tools, and farm implements were removed as well (p. 175). With neither passports, transport, or food, and with close supervision of their activities, escape was beyond reach. To successfully run away or obtain forged papers to travel (p. 171) appear exceptional events. Peasants whose farms had not yet been collectivized nonetheless were subject to deliver food quotas. Nonfulfillment meant fines and searches of their farms (p. 163). Children were encouraged to turn on their parents and report suspected hoarding of food or seeds (p. 167). Bits of precious metals and jewelry in peasant possession were extracted in exchange for food at an increasing number of state-operated hard currency stores (pp. 166, 173). Eyewitness accounts report acts of cannibalism by starving peasants to ensure physical survival (e.g., pp. 172/3, 186). Starvation greatly increased vulnerability to disease and a great many people died of typhus, dysentery, and the like. Demoralization added weight to the psychological cost of dealing with loss of lives and property. One eyewitness, then a school child, recalls a Russian-language song that in the heyday of starvation “would play every day, ten times a day” over

the ubiquitous village loudspeakers heralding the “joyous refrain of town and country: Our burdens have lightened, our lives have gladdened” (p. 184). Resistance met with virtually immediate reprisal by state security forces (e.g., p. 172). While confiscated food stuffs were exported to elsewhere in the USSR, migration was prohibited and offers of food aid (imports) were rejected, matching the official denial of a food crisis or widespread starvation. As Steven Rosefielde (2009) writes: “Grain supplies were sufficient to sustain everyone if properly distributed. People died mostly of terror-starvation (excess grain exports, seizure of edibles from the starving, state refusal to provide emergency relief, bans on outmigration, and forced deportation to food-deficit locales), not poor harvests and routine administrative bungling.” All this combined with the vagaries of weather (particularly bad in 1932/3), with “rapid linguistic and cultural Russification” in Ukrainian cities to which many peasants had been transferred under Stalin’s industrialization drive (p. 167), and topped by state “monopolies or near-monopolies of propaganda, reward, and coercion” (p. 167). Starved of resources, figuratively and literally, the cost of exit became correspondingly impossible to pay, whatever the victims’ objectives. Victimhood might be defined by the degree to which cost and resource constraints are binding and foreclose option to escape victimization.

4. CONCLUSION

Much of the literature covers the Holocaust and post-Holocaust cases, and because of that this chapter has focused on pre-Holocaust genocides. Given its universal claims, if economic theory is relevant post-1940s genocides, it should be relevant pre-1940s genocides. Using a six-fold schema elaborated by Anderton (2014) and applying it in Section 2 even cursorily to the cases of the Yana, Aborigines, Herero and Nama, Armenians, and Ukrainians, we find that all of Anderton’s contentions as to the relevance and potential contribution of economics to help understand genocide more fully appear correct. A more specific investigation, in Section 3,

focusing only on genocide as a behavior of choice, likewise reveals that the economic concept of meeting objectives (“preferences”) under cost and resource constraints is highly relevant and can be illustrated with ease for each of the pre-Holocaust cases that this chapter has, however briefly, examined.

To conclude, we offer eight impressions from our reading of the cases through an economic lens. The first is that the case study writers predominantly seem interested in questions of guilt and of justice. Documentation focuses on perpetrators’ objectives—however distorted and malevolent—and on the mechanics of how and why the atrocities were committed rather than on *how and why they were carried out in one specific way* rather than another. As a whole, the chapters rarely directly consider any genocidal act, or escape therefrom, as the outcome of constraints imposed by costs and resources. Authors tend to take feasibility as given and emphasis is placed on a particular choice made, a behavior observed, and not on what the alternatives, if any, were, or on how any one choice came to be made. This overstates things for the sake of argument, but an important implication is that one cannot hope to improve the score on genocide prevention unless one more fully understands the constraints that may divide acts of genocide into feasible and infeasible.

Second, as to the victims, and again overstating for the sake of argument, in most cases the approach taken is about what is done to them and what is not done for them: Perpetrators are active, third parties may or may not choose to be active, and victims are passive. Even the eyewitness accounts appended to each chapter tend to emphasize victims as passive recipients of violence, not exploring the options they may or may not have had. To an economist, interesting questions lie in exploring what the victims’ cost and resource constraints were and how their (presumed) passivity came to be. The Ukrainian peasants who starved to death during Stalin’s reign saw their predicament increased as an internal passport system and travel restrictions were imposed. This limited their set of feasible choices, but limited it to what extent? What were the remaining feasible options? Just how did survivors survive? It is not clear to us that genocide survivor stories

have been systematically parsed, and compared, to come to a theory-driven and/or theory-creating general understanding of why survival occurs, so that survivors' experiences may be used to better assist future victims and limit the damage done.

Third, in many of the cases, third parties appear somewhat incidental. In all five cases, there was no lack of information about a genocide happening: The German settler's knew and just wanted to changes its course, as did "well-meaning" people in Australia. In the Armenian case, the news was widespread throughout the world. But the relative capacity or incapacity of potential interveners appears not well theoretized or explored and economists might well make helpful contributions in this regard.

Fourth, regarding preferences, costs, and resources, the cases pay most attention to the former, and mostly to those of perpetrators. But one other theme does emerge strongly, namely, depriving victims of food sources and compelling them to deal with sheer day-to-day physical survival. Herero and Armenians were driven into deserts, Ukrainians dispossessed of farm produce, and Yana chased into food-scarce mountain regions. While probably beyond the logistical capacity of the world at the time, today this suggests that a Convention be sought with built-in triggers (thresholds) which, when tripped, precipitate automatic food aid delivery from UN depots by UN forces (also see ch. 7 in this volume).

Beyond perpetrators, victims, and third parties and beyond preferences, costs, and resources, are other observations. From our reading it would appear, fifth, that among victims a spontaneous separation takes place. Victims are not all equal; some have better opportunities than others. Diasporas seem self-selected, for example, in that the relative geographic openness of a genocide-perpetrating country matters. When victims can flee with relative ease to neighboring countries—some Nama south to the Cape Colony, some Armenians north into Russia—then those living near a border will generally have an easier time to escape than those bottled up in the country's interior. Their cost is lower; their opportunity

set is enlarged, exactly as argued theoretically in Brauer and Anderton (2014). In contrast, when one border is more heavily guarded or sealed, then a cross country journey to another border becomes all the more hazardous, as illustrated by Herero trying to cross the desert. This seems too obvious to state but in the cases we read we see little exploration of such themes, nor how they may be exploited to mitigate genocide.

Sixth, in regard to the productivity with which acts of genocide and mass killings are carried out, economies of scale and density are important. For the case of the Yana, scale was not as relevant. Living in small bands, being relatively mobile, and knowing their own lands better than the pursuers, killing took place one “batch” at a time. In contrast, concentrated columns of Armenians marching in the open were far easier to attack. Also decisive in facilitating the killing is, seventh, the relative speed with which victims and perpetrators can act. Speed depends on transport, communication, and bureaucratic or organizational coordination. The set of feasible options for victims can become extremely narrow because of timing. For the Yana, the genocide wore on for decades and for the Aborigines for about two centuries. The economic issue here was neither time nor agglomeration but, to the contrary, the dispersed nature of the victims, albeit within well-defined boundaries, combined with information and network economies. In the cases of Armenia and Ukraine, the killing proceeded fast, in part because perpetrators could coordinate their actions far more easily than victims could organize their escape (several chapters in this book address aspects of genocide from the point of view of organization). That genocide can be both fast and slow should surprise, highlighting once more that genocide is conditional, that it stands or falls on its feasibility.

Eighth, the economics of image (perceptions) and identity (preferences) is highly relevant to genocide and genocide studies (Boulding, 1956; Akerlof and Kranton, 2011): The relative ease of (self)identification and (self)labeling of victims facilitates genocide. The potentially strong call for the development of a supervening identity (“we, all of us,” our “common humanity”) is generally not explored in the cases. If such calls were made, why were they not heeded? Neither perpetrators, victims, nor

third parties are unitary actors. Each of “us” and each of “them” lives by constraints, impelling each to action or inaction. What combination of strength of conviction (preferences), cost, and resources procures one outcome over another? Unless one explores this nexus, one must conclude—probably incorrectly—that for the victims there exists no exit.

There are other themes in, and tools of, economics that could be helpful to the study and prevention of genocide. One thinks for example of (evolutionary) game theory and of behavioral economics, both applied elsewhere in this book, such as public good coordination failure in game theoretic setups or identifying and studying the conditions that shape the anticipatory, strategic behavior of perpetrators, victims, and third-parties, or topics such as framing, cognitive bias, and reference-point dependence in behavioral economics. Even our brief excursion demonstrates that economists can no longer stay away from making the contribution their science affords them to make to the study of genocide, mass killings, and their prevention.

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APPENDIX

Table A1A (Perpetrators): Comparative genocide study conceptual matrix based on Brauer and Anderton (2014)		
Preferences	Prices (costs)	Resources

WHO? [Who held these preferences?]

- 1. Architects & rank-and-file (in-group/s)
- 2. Whom were they about? (out-group/s)
- 3. Are there any in-group opponents with alternate preferences?

WHAT? [What were these preferences about?]

- 1. Perceived threat to full political control (exclusion of new or persistent rival)
- 2. Perceived threat to full territorial control or territorial integrity
- 3. Perceived desire for ethnic/race purification
- 4. Desire for out-group elimination (removal but not necessarily death) or extermination (death) [either as a means to an end (instrumental preferences) or as an end-in-itself (malevolent preferences)]
- 5. Resource confiscation/looting

WHY? [Why did these preferences arise?]

- 1. Gradual or sudden changes in the internal or external sociosphere (political, economic, and/or cultural, e.g., entry or exit of third party)
- 2. Gradual or sudden changes in the biosphere

WHEN? [When were these preferences formed, shifted, or manipulated?]

- 1. Ideological antecedents (e.g., race-based thinking and eugenics)

WHERE? [Place/location?]

- 1. [...]

HOW? [How were these preferences formed and reinforced?]

- 2. Relative ease of identification
- 3. Scope; leverage ratio of out/in-groups
- 4. "Social engineering" of in-group preferences by genocide architects

MONETARY

- 1. Fixed (genocide mgt; plant build-up)
- 2. [Any sunk cost?]
- 3. Variable (recruitment & training of perpetrators; isolation of victims; transport; holding areas; food, drink, shelter, hygiene provision; genocide technology; information control; security to control in/out-groups; border patrol/control costs; etc.)
- 4. (Im/explicit) permission of theft/looting may reduce recruitment cost

NONMONETARY

- 1. Audience cost (e.g., domestic & foreign moral disapproval; pressure to cease & desist)
- 2. Degree of credibility of intervention
- 3. Threats (e.g., of persecution/prosecution)

MONETARY

- 1. Sheer size of monetary resource pool & resource stream (cash-on-hand plus current inflow regime; GDP; natural resource stock)
- 2. Resource augmentation (higher tax rates on incomes & assets; forced debt; debt repudiation; debt rescheduling; forced credit & grants; theft & looting; depletion of natural resources; money creation & counterfeit currency; etc.)

NONMONETARY

- 1. Physical capital (e.g., stock of plant, property, & equipment; infrastructure, weapons stock; etc.)
- 2. Human capital (e.g., education levels; genocide "entrepreneurship" and "reward" systems?)
- 3. Social capital (e.g., sense and strength of in-group identity; loyalty, probity, rectitude of in-group members; sympathetic foreigners)

PRODUCTIVITY-RELATED ISSUES

- 1. Constrained optimization & trade-offs
- 2. Dis/economies-of-scale
- 3. Path-dependence & interaction effects with preferences
- 4. Complements in production; substitutes in production
- 5. Induced substitution by threat of (or actual) intervention
- 6. Cost-lowering devices (such as "self-identification" and "self-victimization")
- 7. Learning-by-doing
- 8. "Bundling" (e.g., enslavement & death)
- 9. Hyper-specialization and comparative advantage in the "production of destruction"

Table A1B (Victims): Comparative genocide study conceptual matrix based on Brauer and Anderton (2014)		
Preferences	Prices (costs)	Resources
<p>WHO? [Who held these preferences?] 10. Of one or more out-groups</p> <p>WHAT? [What were these preferences about?] 1. Avoidance/evasion of identification as out-group member & victim 2. Avoid/evade submission to or abuse by perpetrators 3. Safe escape & wealth transfer/hiding 4. Physical a/o mental survival of self & family 5. Self-sacrifice to save others 6. Preferences usually about the self, not about the targeted out-group [median preference]</p> <p>WHY? [Why did these preferences arise?] 1. Basic human preference for security of self, family, community exists => fighting for appropriate security “market share”? [Perpetrators monopolize security by exclusion devices?] 2. Perpetrators arise 3. Lack of foresight to anticipate the coming danger</p> <p>WHEN? [When were these preferences formed, shifted, or manipulated?] 1. Suddenly or gradually? Subtly or obviously?</p> <p>WHERE? [Place/location?] 1. [...]</p> <p>HOW? [How were these preferences formed and reinforced?] 1. Nature & role of self-identification</p>	<p>MONETARY 1. Cost of resistance (single or collective; spontaneous or organized) 2. Cost of legal passage (e.g., exit visa; forfeiture of assets) or cost of clandestine passage (e.g., distance to safe border crossing; bribing guards) 3. Cost of communication & coordination 4. Cost placed on running one’s business (e.g., restricted occupations, place of business, etc.) 5. Cost of forestalling expropriation 6. Cost of daily survival (e.g., food, drink, clothing, shelter, medications; rationing; etc.)</p> <p>NONMONETARY 7. Restrictions placed on schooling, housing, occupation, transport, movement, association, communication, dress, etc. 8. Nonmonetary costs of passage 9. Search cost for substitutes 10. Loss of trust within the out-group (declining out-group social capital) 11. Psychological burden of insecurity; eventual loss of “spirit” & the will to live</p>	<p>MONETARY 1. Income & assets (threatened by, e.g., punitive taxes; limited employment; underpaid or forced labor; forced dissaving; asset surrender; confiscation, theft, & looting)</p> <p>NONMONETARY 1. The institutions of family & community; reproductive ability 2. Real estate and productive hunting or grazing land (incl. wells, herds, and other resources; could be but often not thought of as monetized) 3. Special skills & attributes (e.g., links overseas; languages spoken; youth; current location, e.g., close to borders) 4. Relative strength of in-group leadership & cohesion that may offer protection 5. ID cards and passports (that may be subject to confiscation or reissuance) 6. In-group social capital & political organization (subject to deliberate destruction)</p>
	<p>PRODUCTIVITY-RELATED ISSUES 7. Avoiding “the singularity of victimhood” 8. Terrible trade-offs; uncommon choice => high “search cost” for optimal solutions 9. Humans are vulnerable & slow; hence both attempted destruction and intervention need to be difficult of effective protection, esp. for impecunious, immobile, incommunicado, young/aged, and/or 10. A production function for hiding & escape (a “technology for hiding & escape”)? [Elements</p>	

Table A1C (Third Parties): Comparative genocide study conceptual matrix based on Brauer and Anderton (2014)

Preferences	Prices (costs)	Resources
<p>WHO? [Who held these preferences?]</p> <ol style="list-style-type: none"> 11. Neighboring state/s [NS] (e.g., in their own territorial integrity & political stability) 12. Non-neighboring state/s (e.g., unilateral intervener/s) 13. International organizations [IO] (e.g., UN) 14. International community [IC] (e.g., NGOs; foreign media interests; foreign individuals & businesses) <p>WHAT? [What were these preferences about?]</p> <ol style="list-style-type: none"> 1. Active opposition to genocide; open or implied complicity; outright disagreement 2. Upholding UN charter and genocide convention; state sovereignty principle 3. Can-do or can-do-nothing attitude 4. Neutrality or by-stander (“wait-and-see”) 5. NS and outside interest/s in territorial integrity & polity stability of NS’s <p>WHY? [Why did these preferences arise?]</p> <ol style="list-style-type: none"> 1. Sovereign control vs universal human rights 2. Third party political, economic, cultural interests for anti-genocide (or silence) preferences 3. Anti- (or “pro-”)genocide as preference derived from (subordinate to) other preferences <p>WHEN? [When were these preferences formed, shifted, or manipulated?]</p> <ol style="list-style-type: none"> 1. Peace of Westphalia; nation-state formation; League of Nations; United Nations 2. Result of pre, during, postcolonial period <p>WHERE? [Place/location?]</p> <ol style="list-style-type: none"> 1. [...] <p>HOW? [How were these preferences formed and reinforced?]</p> <ol style="list-style-type: none"> 1. Nation-state sovereignty principle 2. “Responsibility-to-protect” concept 3. Moral hazard potential 4. Political, economic, cultural interests 	<p>MONETARY</p> <ol style="list-style-type: none"> 1. NS: Cost of border patrol/control (dep. on physical attributes of borders) 2. NS: Direct monetary/budgetary cost of hosting refugees 3. Cost of intervention (troops, equipment, etc.) 4. NNS/IO/IC: Distance increases all costs of intervention 5. Information & communication cost <p>NONMONETARY</p> <ol style="list-style-type: none"> 6. Potential conflict spill-over on NS’s own polity 7. Environmental costs of hosting large numbers of refugees 8. Domestic & global audience cost 9. Transaction & coordination cost (can be monetary) 10. Population ignorance a/o apathy to lend intervention support 	<p>MONETARY</p> <ol style="list-style-type: none"> 11. Specific budgets/funds available for equipment, troops, billeting & logistics 12. General size of global GDP 13. Specific size of intervening country GDP <p>NONMONETARY</p> <ol style="list-style-type: none"> 14. Audience costs (against perpetrators) [but audiences are fickle and can change rapidly] 15. Targeted (“smart”) sanctions, incl. disrupted trade & investment, esp. when there is an “inclusive elite” (i.e., broad-based links to be targeted) 16. Credible threat of penalties against perpetrators (e.g., International Criminal Court) 17. Long-term engagement with and development of potentially vulnerable societies to build up a diverse, dispersed resource pool; development of institutions of law & order; land registries; open-society culture [possible backlash charge of “neocolonialism,” etc.] 18. Genocide prevention strategy and implementation
	<p>PRODUCTIVITY-RELATED ISSUES</p> <ol style="list-style-type: none"> 19. Unilateral, bilateral, or multilateral intervention; regional or global multilateral intervention? 20. Private vs collective interests; amalgamation, bargaining of conflicting interests; UNSC P5 veto 21. Coordination, if any, with civil society a/o business parties & interests 22. Principal-agent & free/easy-rider problem; bargaining over cost-sharing 	

