

Science, Conflict and Migration: Public Perceptions About Immigration from Africa, 1920s to Present

by Abigail Senne

Abstract

The goal of this paper is to examine the relationships between current African immigration trends, the history of sub-Saharan Africa, and economic and social factors in the United States as a primary country to which African migrants travel. Questions that are considered in the paper include how civil and political strife in the past, seen through the specific case of Kenya's history, have particularly influenced American perception of African immigrants; how scientific achievement of African scientists contributes to their home countries' public image; and whether current immigration trends are creating a 'brain drain' that can in any way be attributed to United States policymaking on African affairs. As part of the primary evidence for this paper, opinions collected from a number of participants in a short, randomized survey conducted in Colorado Springs on African immigration will also be included.

Introduction and Purpose of the Paper: Attitudes toward Immigration from Africa

“The United States... has benefited from [African] immigrants... and remained competitive globally. It has not invested in their education but benefits from the training and skills that were invested in them... Besides the contributions to scholarship, they have also contributed to American society in general by bringing with them their rich culture and sharing their history with American students, colleagues, and the public. They have influenced American culture as much as they have been influenced by it” (Metaferia and Abidde 11). This quote from 21st century Ethiopian immigrant Getachew Metaferia’s essay “Reflections on Exile” embodies the essence of what immigration observers have called the ‘exchange’ that has taken place in recent decades, where talented scientists and medical workers immigrate to the USA from African nations. The foremost quality that Metaferia mentions in these immigrants (specifically Ethiopians), although it is true for many African immigrants, is the state of their education upon arriving in the United States. More than their experience or reputation, the education of many African immigrants is the main ‘pull’ factor, or appeal of immigration, operating to bring them to the continental US. One example of this pull among many created in the United States, is the existence of the O-1 visa, which provides opportunities for “individuals with extraordinary ability or achievement” to visit, work, or live in the country with a view to becoming permanent residents (U. S. Citizenship and Immigration Services 1). With such a desirable payoff, African immigration has the potential to benefit both the United States and the African nations from which immigrants come. Immigration from Africa, both past and present, is an invaluable source of scientific and medical expertise from which the United States can benefit; however, societal attitudes and prejudices in the USA have presented barriers to African immigration. These attitudes have been shaped by the perceived lack of value of such immigrants, as well as negative perceptions about conditions in Africa itself over the last hundred years (1920 – 2020), such as ethnic violence, civil and political strife, and lack of opportunity, and these current perceptions will be demonstrated as part of this paper’s research with a small, opinion-based survey as well as with the benefit of online and print scholarly sources.

History of the Continent: Kenya as a Microcosm of African Affairs

While current events tend to occupy most of the reportage on African affairs, to properly understand the state of economic and political relations in and around the African subcontinent,

some history of the region must be read in addition to history of the country to which the immigrants travel - in this case, the United States. As an example of how African history is often overlooked as a contributing factor to immigration and scholarship, the history of Kenya, during and after colonization, shows in small-scale what is often visible on a large scale even in African nations from other regions of the continent. Kenya is particularly suited to act as a sample case because of the way in which its history parallels that of many other African nations, including its legacy of political and ethnic strife. Beginning in the 1890s, as historian Robert Asprey documents, British colonists began moving into Kenya and 'acquiring' lands that previously were owned by native peoples (Asprey 628). This early period of colonization, continuing about thirty years into the 1920s, did bring some of the benefits of Western medicine, agriculture, and technology. However, as Asprey also argues, this venture was tainted from the beginning with prejudice: "Had the white man respected the native's identity, his traditions and beliefs, his dignity and natural ambition, he might still be in control of a prosperous Kenya. *He did no such thing*" (emphasis added; Asprey 628). By treating human beings in this way, political movements with roots in tribal practices and the aim of freeing the African population had come into being as soon as 1921. One of the most prominent of these in Kenya was the Kikuyu Central Association, better known by its acronym, KCA (Asprey 630). Until after World War II and the leadership of a man named Jomo Kenyatta, however, the 'subversive' KCA did not become a dominant voice in colonist-controlled politics, and a semblance of order was maintained under the colonist government.

While the order imposed by the colonist government appeared to some observers outside Africa to be fully stable, Jomo Kenyatta believed that to be recognized properly by the outside world, an independent Kenya must seize control of its own destiny. Jomo Kenyatta, while usually remembered as a Communist, freedom fighter, and later politician, was also an anthropologist and observer of his time. After WWII, many Kenyans who had served in the Allied armed forces either immigrated to England or the USA or returned to Kenya with new ideas of how self-governance should be carried out (Asprey 633). One of the reasons that Kenyatta's message and that of the 'rebellious' KCA began to align, according to early Kenyan scientist Davy Koech, was that many Kenyans trying to find a place for Kenya in the wider world began to agree with him: "What Kenyatta was doing, my father was doing the same, and they were about the same age" (Koech 4). As a British-trained anthropologist, Kenyatta believed in the importance of preserving his culture; as an observer of his time, he also realized that Britain was no longer the great world power she had been before World War II. England's role had been largely replaced by the USA and the USSR, and Kenyatta saw in this fact an opportunity for the KCA and other organizations to gain more independence.

After World War II, for both Kenya and many other African colonies, everything – and nothing – changed all at once. As both Asprey and Koech point out in different ways, the white Kenyan government was still underpaying black farm laborers, denying natives adequate representation in government, and trying to impose their will on a colony that was increasingly unhappy with the political situation; in that sense nothing had changed. However, for the first time, returning Kenyan WWII volunteer soldiers joining the KCA had examples of how to conduct insurgency, weapons knowledge, and a new leader who promised to never stop until Kenya was free. The existing government attempted to pre-empt any further unrest by arresting Kenyatta and 182 others with very delayed to no trials (Asprey 634), tipping their hand and lending more support to the KCA.

What happened next was sadly to be repeated around the continent, with repercussions even to the present day. A group called the Mau Mau, with the suspected blessing of the growing KCA,

began attacking white settlers without distinction; white colonists formed a vigilante group called the 'Police Reserve' and fought back violently and desperately; and "the Aberdare and Mount Kenya forests became Prohibited Areas – anyone found in them could be shot on sight" (Asprey 636). This state of near civil war continued for ten years, with over 13,000 Kenyans dead, until the release of Kenyatta finally occurred in 1961 (Asprey 640). This civil strife, among other effects, caused many Europeans to reform their perceptions of Africans from teachable yet second-class citizens to people who were lesser in status, very dangerous, and no longer teachable. A 'dark' period in African research and scholarship resulted across the continent of Africa, fueled by this perception, as Europeans abandoned facilities and labs to flee from their former colonies.

African Scholarship: Giving Science in Africa A 'Try' - with the Benefit of American Education

What was the state of scientific achievement on the continent while these years of unrest were continuing, and what consequences did they have for continuing education to the present day? Before African nations became independent, all scientific research of any kind on the continent had to be performed by white Europeans. To many Africans during and after independence, this gave scientific research a somewhat suspicious connotation. In Koech's words, soon after becoming an African native scientist himself, "If the British introduced it, we said we don't need it. But the people who could see a little further ahead into the future could say, "No, let us try." (Koech 5). Davy Koech's own life story consisted of giving African scholarship a 'try' at a time in which, as he notes, he "was the first African employee of the WHO Immunology Research and Training Centre. I was employed as a research officer trainee. And at the Wellcome Trust I was also the first Kenyan to be employed at the scientific level" (Elliot et al. 1). While he remains most famous for founding the Kenya Medical Research Institute (KEMRI) back in Africa, Koech's graduate education was *almost entirely* accomplished in the United States, an example of a trend that continues to the present day. Immigration – even if it was a temporary journey over a few years for education – shaped Koech's life and future accomplishments in the fields of pathology and immunology tremendously. Foreign education has had the same effect on many other lives, in the decades since, serving as a means of distribution of medical and scientific knowledge both to Africa and into the wide world.

Despite these benefits, and even after the trend of African nations 'winning' their independence from European powers became accepted, African scientists in general had difficulty securing jobs at the same pay level and academic rigor as Europeans did in Europe and the USA, and this situation was especially pronounced for those who wished specifically to go back to their homelands and work to better the state of their countries instead. One important result of this disparity is a group of scientists and medical personnel, especially in the years 1945-1965, whom the social scientists H. G. Grubel and A. D. Scott described in a 1966 article for the *Journal of Political Economy* as being 'professional migrants', going back and forth to the US and other First World countries for studies and work opportunities, but returning to Africa when political conditions cease to be favorable to their immigration (Grubel and Scott 4).

Past Attitudes Back in the Present: Colonization's Consequences

Despite the trend of African scientists' newfound and continually increasing access to education on foreign shores, there is a potentially dangerous issue hidden under the basic facts of the history of Africa, the historical treatment of people of color in the developed world, and the immigration policy of the United States, Great Britain, and other economically and technologically advanced nations, all of which will be addressed later in this paper. Aside from even the bare facts of discrimination and racism in the former empires of the European nations involved in Africa, how

have African immigrants been perceived, not only in Europe, but also by United States officials in the past? Author and immigration expert Roger Daniels relates one egregious example where African ambassadors and United Nations advisers to the US government (who were also black Africans) were denied roadside service and restaurant privileges in the American South, and even were requested by President Kennedy himself to cease using the public highways and to instead fly back and forth from Washington, DC (Daniels 114). Therefore, African ambassadors were often not treated with the same deference as their European colleagues. How much more severe would the case of the average medical or science professional, newly arrived from a nation that had only recently been formed, be?

It may well be argued based only on the *numbers* of African scientists and medical workers who continue to come to the US and Canada every year that this issue is dead and buried, and there is no further paternalism on anybody's part. Some evidence appears to bolster this numerical argument, such as social scientists Grubel and Scott's note that the total number of immigrants from any country with bachelors' degrees or higher in any given year between 1945 and 1965 was only "equal to the annual output of about 5 percent of the institutions of higher education in the United States" (Grubel and Scott 10). Since those decades, the number of African immigrants has increased proportionally to the growth of education among native Africans, and numerically, but not proportionally, more Africans now come to the US every year than during the '60s. On the surface, these facts appear to support the argument that the interaction of immigration policy and discrimination is in fact dead.

However, this argument can be disproved by reading further into the statistics. As can be seen in the O-1 visa and other immigration policy, in the words of the National Science Board's website, "many countries have made it a national priority to attract international talent in S&E" (National Science Foundation), and the United States is no exception. However, the situation this stance leads to is not necessarily a rosy one. Taking people in (or out) solely on the basis of their talents, and only secondarily for humanitarian reasons, may make good political sense, and in fact, the proportion of scientists in the United States who are foreign born has dramatically increased over the rest of the population in recent decades (National Science Foundation), but it is not a long-term strategy if economic and political conditions in Africa are to improve. Paternalism, in the sense that 'the poor people' (who happen to be the best and brightest in a region) only need a temporary place of refuge, and then the US government can stop supporting them and the numbers of African immigrants will naturally decrease, is not the best approach to this problem, chiefly since many immigrants, especially in the science and engineering fields, either will not or cannot go back to Africa.

The Resource Draw: Comparative Wealth and the Reality of Return

In terms of government funding for the sciences as well as established institutions, the United States has an undeniable advantage over, for example, Kenya, with a research budget in the billions of dollars (National Science Foundation). This comparative abundance of resources, along with the argument that science in the US cannot exist without foreign scientists at this point in time, combine to make it unlikely that current immigration trends will reverse by themselves. In an article titled "Why Immigrants Are Vital to Science in the U.S.", science journalist Josh Goldman makes this point very concisely. According to Goldman, "Data suggests that over half of the foreign-born recipients of doctorate degrees in the U.S. remain in the U.S. workforce to pursue their careers, becoming part of the multicultural milieu that has made, and will continue to make, America great. Let's not forget the contributions that immigrants have made in advancing science, or the potential contributions to come" (Goldman 5).

Regardless of the contributions that immigrants from Africa have made, what do the immigrants themselves have to say about their experiences? In their paper *Migrations et gouvernance en Afrique et ailleurs*, (“Migration and governance in Africa and elsewhere”), immigrant scientists Samadia Sadouni, Mamoudou Gazibo, Mamadou Dimé, et al., make the point that migrants, once having left Africa for school or work, have a difficult time reintegrating into African society. Writing about the particular case of his home country Senegal, Dimé says that “motivations for return, experiences of social reintegration and professional reintegration remain contrasted... The return itself was judged to be a dotted course with pitfalls for which the migrant must be sufficiently prepared... There are indeed a multiplicity of institutional obstacles, family, social, cultural, and economic” (Sadouni and Gazibo et al. 62). And in the opposite direction of migration, Fraternel Amuri Misako, an immigrant professor from the Democratic Republic of the Congo, writes that “in this kind of “ideological” conflict between the Belgian Congolese tradition of “generalists” inspired by the necessity of providing Congo with a generalist elite (a newly independent state), and an American tradition of “specialists,” I had to learn quickly in order to perform any tasks professionally and defend myself as a “newcomer” who deserved respect in the face of American students and peers” (Abidde et al. 4). If masters- and Ph.D.-degree holding immigrants can experience this struggle, then so can any immigrant from Africa in the S&E fields.

However, as medical scientist Kelly Chibale points out, it is also a mistake to assume that Africa is stagnant in terms of medical and scientific discovery; rather, there is some research that can *only* be conducted in Africa, such as research into rare tropical diseases and the firsthand effects of sharecropping and other agricultural practices that are becoming more and more unique to Africa. Chibale also indicates the need of native African populations; “the economically challenged populations of sub-Saharan Africa continue to bear a substantial burden of infectious diseases such as malaria, tuberculosis (TB), and HIV/AIDS” (Chibale et al. 5-1). Her colleagues Eliane Ubalijoro and Timothy Geary also make the point that while Africa holds most of the world’s undiagnosed diseases, it also holds unique opportunities to combat them. “Africa hosts ~30% of the world’s flora, represented in ~72,000 species, yet relatively little investment has been made in exploiting this resource for the discovery of new drugs compared to that expended on global pharmaceutical research” (Chibale et al. 6-1).

Interviews in the Park: Personal Stories and Perceptions

Although such potential exists, is there still a pre-existing barrier in the United States to a higher volume of migratory travel back and forth between Africa and America, or of African scientists achieving scientific discoveries? If so, how much of this attitude can be explained by historical perceptions? To find some of the answers to these questions, a short survey on public opinion about immigration from Africa in the last hundred years was conducted, and American opinion on this movement was collected. Information on the means and methods used in the survey will be included as an appendix to this paper.

Sample size is very important for proving the validity of the results of any sample. Considering this fact, it is in the best interest of the arguments made here *not* to place this survey as an integral part of this paper – with the notable exception of the questions seeking personal opinions on the topic of immigration from Africa in the last hundred years, which will be used as part of the circumstantial primary evidence for this paper. With a sample size of less than 30 responses, this survey has limited usefulness in any way but one – to gather primary source responses and reactions. Therefore, a selection of several of the most concise reactions and responses to each of the two last, opinion-based questions will be listed as part of the paper. Also,

the results of all questions will be shown in chart format in the appendices as a part of the primary research.

The primary research result found as a result of this survey demonstrated that most responses displayed a wide range of opinions and ideas on the topic. Several responses to question 3, for example, listed improvements in living conditions as a chief reason for immigration to the US from Africa, and this theme occurred frequently in many responses to the other questions as well. One respondent whose response was recorded in detail for statistical purposes identified 'brain drain' specifically as "its [country of origin's] professionals leav[ing] for a better life elsewhere," while other respondents gave more generalized definitions: "when the state/country loses its educated/specialized people to other state/countries", or simply that "educated people are continuing their career in a country other than the one where they were born/raised."

Question 4 had a similar range of results, this time in the names given of politicians who have been involved in government policymaking on African affairs. Of particular interest to this survey was the incidence of *recurring* names (in essence, names of politicians that were mentioned more than once). Out of the 22 responses gathered, four politicians were mentioned more than once: Senator Ted Cruz (R-Texas), former President Trump, former Secretary Michael Pompeo, and the late former Senator Joseph McCarthy (R-Wisconsin), all Republicans. In fact, the majority of officials mentioned by name were Republicans, with only one other political affiliation, Independent political representative, Senator Bernie Sanders (I-Vermont), mentioned by name in one unique response.

While this survey is not large enough to be definitive, the surveys collected so far do indicate that the general trend among Americans surveyed is to be informed at least partially about events and reporting from Africa. Overall, the survey responses support the hypothesis that while informed about general events on the African continent (seen particularly in the last question where two-thirds of all responses recognized at least one event, person, or place listed in the question¹), and generally in favor of immigration of African scientists and medical professionals, most Americans surveyed are slightly less likely to be in favor of immigration from war-torn countries (from question 2), and almost two-thirds of all those surveyed either did not know about the issue of 'brain drain' or had no opinion to give on the topic². Additionally, over half of all respondents said they had never heard of any politicians with specific biases for or against immigration from Africa.

What does the survey say about public opinion? One hypothesis held while writing and conducting the survey was that in the final question, positive responses would be higher for items with a stronger negative connotation, and lower for neutral or 'positive' selections; in other words, that the average participant would be more likely to respond to the 'negative' aspects of African history and immigration than the 'positive.' However, the survey results only partially corroborated this hypothesis. In the first question, for example, a majority of all respondents answered the question very positively, and this percentage only decreased somewhat for the second question, which had a more 'negative' bent (82% positive in the first, versus 73% positive in the second). Therefore, while the average person does not hold a position on African history or immigration policy that focuses on the positives, neither is current opinion generally set against them (in a reversal of historical trends), based on the limited conclusions that can be drawn from this survey's results.

¹ Survey metrics are given in Appendix B of this paper.

² Ibid.

The Sea Changes: Writing in New Players in the Immigration Drama

In concurrence with what the interviewees had to say about their perception of current trends, sociologist Charles Hirschman writes that “in spite of lingering prejudice and discrimination against immigrants, most Americans are beginning to acknowledge the positive contributions of immigrants” (Hirschman 1). The surveys overall correlate strongly with this theory, also reflecting Hirschman’s contention that Americans today are more likely than ever to accept immigrants from Africa and Asia (although curiously, this acceptance does not extend to Latin American and Middle American immigrants). Despite the disparity in how immigrants from different regions are perceived, one principle that Hirschman points out is that Americans of all political leanings and parties desire to believe that America is “a nation of immigrants” (Hirschman 1).

Is there a difference between how Americans would like to see themselves in immigration history, and the actual facts? Writer Anna-Lee Saxenian of the Brookings Institute believes there is not: “Economic openness has its costs, to be sure, but the strength of the U.S. economy *has historically derived from its openness and diversity*—and this will be increasingly true as the economy becomes more global” (emphasis added; Saxenian 29). Certainly, there may be an element in the US voting population that is almost isolationist in its leanings, but this group, as Saxenian among others, points out, has decreased in membership so tremendously from its glory days in the 1920s and 1930s (when it was typically promoted by Democrats, in a reversal of current political trends), that reports of its current life, to twist a popular phrase, are almost certainly exaggerated.

Sending but not Receiving: The Future of Immigration from Africa

Where does all this leave the USA in the immigration debate over immigrants from African nations in particular? There are many possible views of this issue. One major perspective that has not yet been fully addressed in this paper is that of the ‘sending nations’ from which immigrants come to the United States. As Saxenian writes, “The view from sending countries, by contrast, has been that the emigration of highly skilled personnel to the United States represents a big economic loss, a “brain drain” (Saxenian 2). How big is this loss, and what countries are most affected? Curiously, those countries which experience the most brain drain do not always correlate with countries that have the most civil strife or violence. Rwanda, for example, does not export nearly as many scientists as Kenya or Uganda, although this is also an effect of relative population sizes and geographic sizes of the countries (Sadouni 2). Is it morally right for the United States, then, even drawing from countries with large ‘brain pools,’ to purposefully attract large numbers of science and engineering personnel from African countries? African affairs reporter Onize Ohikere, among others, addresses this question with a quote from an interview with a Nigerian-born immigrant bank worker, Osariemen Opaluwa: “They’re taking the best of the best from our countries, and I think our leaders are still sleeping” (Ohikere 4). Therefore, draining Africa’s intellectual resources is not the way forward into economic bliss for First World nations, even if it comes with a temporary bonus.

Even without the draw of the O-1 Visa and similar measures, however, African immigrants would continue to come to the USA. Two factors that would contribute to this movement, even in the absence of deliberate advertising from the government and other sources, are the sheer difference in amounts of monetary and academic resources and the comparatively stable political environment in the United States versus the ‘sending nations’ (Saxenian 2). The main question before policymakers and citizens in future years, then, will be how to welcome highly skilled African immigrants when they come. Will we be socially and economically welcoming of so many culturally and ethnically distinct strangers? Can we uphold the idea, if not the historical progress to this date, of viewing all people as equal before ‘God and country’?

Returning to Getachew Metaferia's essay on the 'exchange', quoted in the beginning of this paper, a more hopeful perspective on the history of Africa in the past and what the continent has to offer in the future through its immigrants' skills is given. "Their success is not, by all means, a surprise. They are hardworking, proud of their culture and Americans respect their hard work...They teach with passion and students generally respect them. They feel they have contributed to helping the country produce future leaders," Metaferia wrote (Metaferia and Abidde 12). African history, existing prejudice on the part of colonists and some Americans, and internal conflict have all combined in the past to displace and disperse African scientists to the rest of the world. While the past's ethnic and military conflicts continue, sometimes more strongly than ever before, and African immigrants continue to struggle with the cultural differences between America and their home countries, Africa's and America's interrelated history has never been more important. The survey conducted as part of the documentation of this paper also supports the idea in general terms that Americans do indeed respect the contributions of African immigrants and are more willing than ever before to see them succeed academically and socially, even as they settle and assimilate in some fashion here in the United States. While US government policies have also contributed to this brain drain, the greater trends for immigrants toward returning to their countries of origin also indicates that professional migrants in the sciences, once permanent birds of passage, are now more likely than ever to find a final place to alight in their 'home' countries, whether old or new.

Works Cited

- "Immigration and the S&E Workforce". 2018 Indicators report, National Science Foundation, <https://www.nsf.gov/statistics/2018/nsb20181/report/sections/science-and-engineering-labor-force/immigration-and-the-s-e-workforce>. Accessed 3 June 2021.
- "O-1 Visa: Individuals with Extraordinary Ability or Achievement." U. S. Citizenship and Immigration Services, www.uscis.gov. Accessed 3 June 2021 from <https://www.uscis.gov/working-in-the-united-states/temporary-workers/o-1-visa-individuals-with-extraordinary-ability-or-achievement>.
- Abidde, Sabella Ogbobode. (Ed.) *African Scholars and Intellectuals in North American Academies: Reflections on Exile and Migration* (1st ed.). Routledge Press, <https://doi-org.libproxy.uccs.edu/10.4324/9780429202537>. Accessed 10 June 2021.
- Asprey, Robert B. *War in the Shadows: The Guerrilla in History*. Doubleday Press, 1975.
- Chibale, Kelly, Mike Davies-Coleman, and Collen Masimirembwa. *Drug Discovery in Africa: Impacts of Genomics, Natural Products, Traditional Medicines, Insights into Medicinal Chemistry, and Technology Platforms in Pursuit of New Drugs*. Springer Publishing, <https://link-springer-com.libproxy.uccs.edu/book/10.1007%2F978-3-642-28175-4>. Accessed 10 June 2021.
- Daniels, Roger. *Guarding the Golden Door: American Immigration Policy and Immigrants since 1882*. Hill and Wang Press, 2004.
- Koeh, Davy and D. Elliott (Ed.). (2018). *Reimagining Science and Statecraft in Postcolonial Kenya: Stories from an African Scientist* (1st ed.). Routledge. <https://doi-org.libproxy.uccs.edu/10.4324/9781315163840>.
- Goldman, Josh. "Why Immigrants Are Vital to Science in the U.S." Union of Concerned Scientists USA, 30 January 2017, <https://blog.ucsusa.org/josh-goldman/why-immigrants-are-vital-to-science-in-the-u-s/>. Accessed 3 June 2021.
- Grubel, H. G., and A. D. Scott. "The Immigration of Scientists and Engineers to the United States, 1949-61." *Journal of Political Economy*, Vol. 74, No. 4 (Aug. 1966), pp. 368-378, <https://www.jstor.org/stable/1829153?seq=1>. Accessed 3 June 2021.
- Hirschman, Charles. "Immigration to the United States: Recent Trends and Future Prospects." *Malaysian journal of economic studies: journal of the Malaysian Economic Association and the Faculty of Economics and Administration, University of Malaya*. Issue 51, 2014, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4302270/>. Accessed 3 June 2021.
- Ohikere, Onize. "An Exodus from Africa: Young, skilled workers are leaving Nigeria as the country battles violence, mass abductions, and economic instability". *World Magazine*, World News Group, print issue, volume 36, issue 9, 8 May 2021.
- Sadouni, Samadia and Mamoudou Gazibo. *Migrations et gouvernance en Afrique et ailleurs*. 1 ed. Presses de l'Université du Québec, 2020. *Project MUSE* muse.jhu.edu/book/78362. Accessed 11 June 2021.
- Saxenian, AnnaLee. "Brain Circulation: How High-Skill Immigration Makes Everyone Better Off." Brookings Institute, <https://www.brookings.edu/articles/brain-circulation-how-high-skill-immigration-makes-everyone-better-off/>, 1 December 2002. Accessed 3 June 2021.

Appendix A:

Means and methods of the survey

Randomization for this survey was accomplished by taking survey responses in different physical locations, as well as online. Survey questions were considered to have been filled out if the questions had a concrete answer; in the case of the first two questions, if the question had an answer other than ‘positive,’ ‘negative’ or ‘neither,’ it was not counted. For the last three questions, if the answer was ‘no’ or ‘I don’t know,’ the response was not counted. This selection was mostly used to separate the responses that could be counted under the established categories.

This survey, however, also makes the point that there is only so much the average survey can do on a topic like immigration studies. With a subject as complex as African immigration studies, there is only so much usefulness to any survey that treats the continent as a whole. Attempting to fit a continent as diverse in history and culture as Africa into any one survey – and this applies to other public opinion surveys as well – is more likely, therefore, to result in bringing out pre-existing knowledge of the topic by the interviewees than any responses approaching cumulative or complete knowledge.

The following questions were asked about the main topic on the survey:

- Question 1: In your opinion, has immigration of public health professionals, scientists, and engineers from Africa in the last 100 years had a positive effect on US scientific achievement, a negative effect, or neither?
- Question 2: In your opinion, should the US be more open to high-achieving African immigrants from countries with active civil strife and violence, less open, or neither?
- Question 3: Have you heard the term ‘brain drain’ before? Describe briefly what it means to you.
- Question 4: Can you name one US government official below the presidential/vice-presidential level with a public stance firmly for or against immigration from Africa?
- Question 5: Do you recognize any of the following people, events, or associations? If so, which ones? (List follows):

Lord’s Resistance Army (LRA), Jomo Kenyatta, Idi Amin, African Union, Rwandan genocide, Al-Shabaab, Mohammad Gaddafi

My hypothesis for this survey overall was that if presented with questions on the current state of science and technology-related immigration from Africa, those with existing knowledge of the ‘negative’ aspects of such immigration (evaluated in questions 3, 4, and 5) would have a higher percentage of negative responses to the first two questions. Further, I also hypothesized that in the final question, positive responses (counted as a circle around an item or a verbal/written response) will be higher for items with a stronger negative connotation. These terms include:

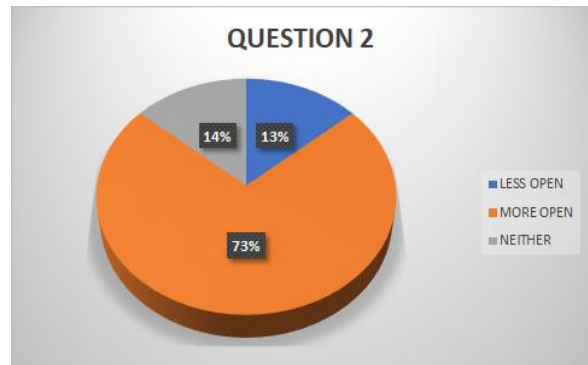
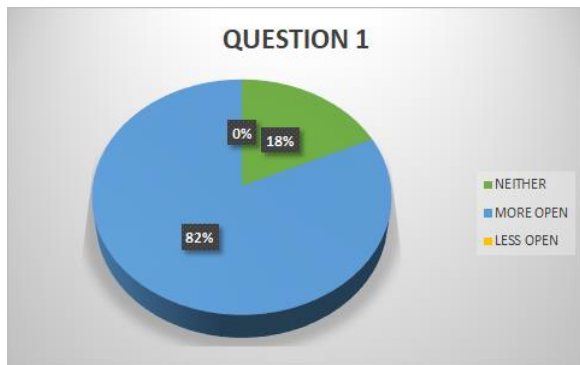
- LRA: Multinational political association with military aims in multiple African nations, known in many State and departmental lists as a terrorist organization
- Idi Amin: Dictator of Uganda, 1971-1979
- Rwandan genocide: Possibly the most recognizable item on this list with a strong negative connotation; denotes the genocide of Tutsi and Twa peoples in Rwanda in 1994
- Al-Shabaab: Terrorist organization currently operating in Somalia with ties to al-Qaeda
- Muammar Gaddafi: Former dictator of Libya

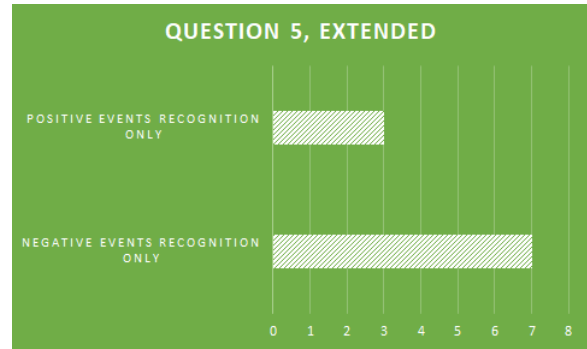
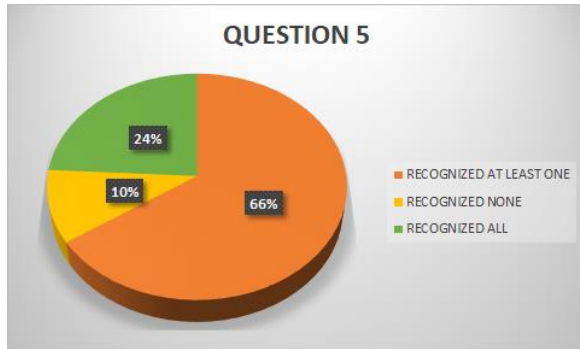
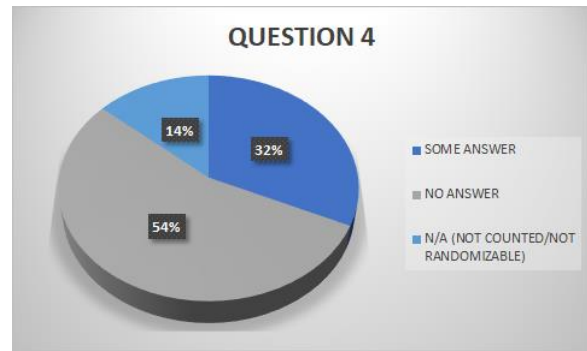
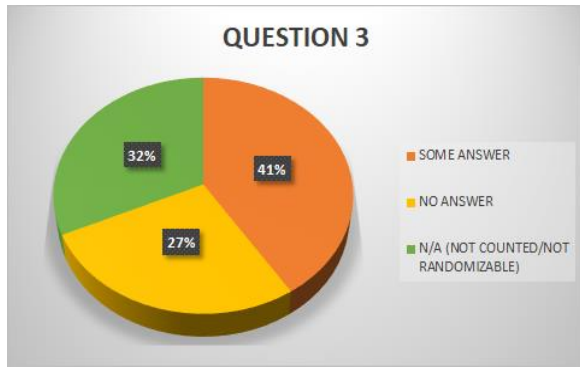
These items, according to the hypothesis, should have been recognized more often than more neutral items on the list.

Again, because the questions of this survey are interlinked with each other (i.e., information from one section relates to the information in the other sections), only completely filled surveys can be counted. Responses using profanity, information not relevant to the research topic, or an answer of 'neither' for either of the first two questions cannot be counted; this is due to the difficulty of relating answers in the 'undecided' category to the last three questions of the survey.

Appendix B:
Survey results and graphs

Survey metrics and other information				
Locations selected	Number of surveys from each location mentioned	Approximate ages of participants (average)	Approximate time a member of each group spent filling out the survey (average)	Additional notes about each location, number of surveys, or other information
Online	2	Mid-20s	3 minutes (surveys given electronically)	--
Local park (Quail Lake Park, Colorado Springs, CO)	12	Mid-30s	5 minutes (surveys given verbally)	Surveys consisted of 9 individual responses and 3 responses from a 3-person group.
In-person (local neighborhood of Stratmoor Hills, Colo. Spgs., CO)	3	Mid-50s	6 minutes (surveys given verbally)	Average age of a participant was far higher at this location (older neighborhood).
Other (forwarded or conducted by a separate participant)	5	Mid-30s	3 minutes (surveys given electronically)	--





Question 3	Question 4
Push and pull factors implied: "Brain Drain is when highly educated and highly qualified individuals leave their country for better living and working conditions elsewhere."	Frequent mentions [in 4 responses]: Former President Donald Trump
Response specific to the United States: "Talented individuals from other countries come to the US to receive education. They end up staying here, and their country misses out on the return of their nationals and receiving the benefits of their expertise."	Frequent mentions [in 3 responses]: Former Secretary Mike Pompeo
More generalized understanding: "When the state/country loses its educated/specialized people to other state/countries", or "educated people are continuing their career in a country other than the one where they were born/raised."	Frequent mentions [in 3 responses]: Former Senator Joseph McCarthy
Pull factors mentioned again: "Its [country of origin's] professionals leave for a better life elsewhere."	Frequent mention [in 2 responses]: Senator Ted Cruz
	Unique mention: Mayor Wolf of Riverton, WY
	Unique mention: Senator Bernie Sanders

Appendix C:*Note on translation of source*

Sadouni, Samadia and Mamoudou Gazibo (Eds.). *Migrations et gouvernance en Afrique et ailleurs*. 1 ed. Presses de l'Université du Québec, 2020. *Project MUSE* muse.jhu.edu/book/78362. Accessed 11 June 2021. This source e-book, in the original French and therefore requiring translation, gives a detailed account of migrations from sub-Saharan and central Africa, as well as some intra-continental migrations due to economic and political factors. Policy changes implemented by the African nations undergoing migrations are also discussed. This paper lies more in the category of historical documentation than primary argument, although the perspectives of the coauthors are included as parts of the narrative. One concern that is important to avoid with this source is that of ambiguous translation or meaning lost in translation. To partially avoid this difficulty and obtain as precise a translation as possible, it is the author's intention to use at least two translation programs, due to an absence of fluency in either native French speaker in either Continental French or Quebecois, in which this paper was published.