

# continuum

The Spelman Undergraduate Research Journal

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Psychophysiological  
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# Letter from Editors

Dear Readers,

It is with great excitement that we introduce the inaugural issue of Continuum: The Spelman Undergraduate Research Journal. Since 2015, our team has worked to create a culture of multifaceted engagement with research among Spelman College students. To that end, we hosted workshops, information sessions, and one-on-one conversations with students about research. Now, our efforts from the past two years have culminated in this publication, which showcases original student research spanning disciplines from public health to sociology. Through the variety of research presented in this issue, we hope to encourage our authors and readers to consider the intersectionality of research.

In this issue, you will find four original research articles written by current and recent Spelman undergraduate students. Each original research article has implications for race and or gender. Chelesa Fearce conducted her research at Morehouse School of Medicine where she studied the impact of APOL-1 gene on hypertension. African Americans have higher rates of hypertension and one of the potential factors for this difference is the greater presence of APOL-1 among African Americans as compared to other racial groups. The five featured pieces explore research topics and questions that directly impact black women across the diaspora. One such piece, the micro-documentary "Self-Loving My Black Magic... In a Dutch Context" by Synclaire Butler, illustrates through the stories of black women in the Netherlands, the power of love as a form of resistance to racism.

As the cover depicts an ocean roiled with blue colors, we aim to show the richly hued ways black women interact as subjects, authors, and pioneers in research. The origin of Continuum begins here in these next few pages and we invite you to fully engage with the words and ideas on these pages.



Ansley Carlisle '18



Abiana Adamson '18

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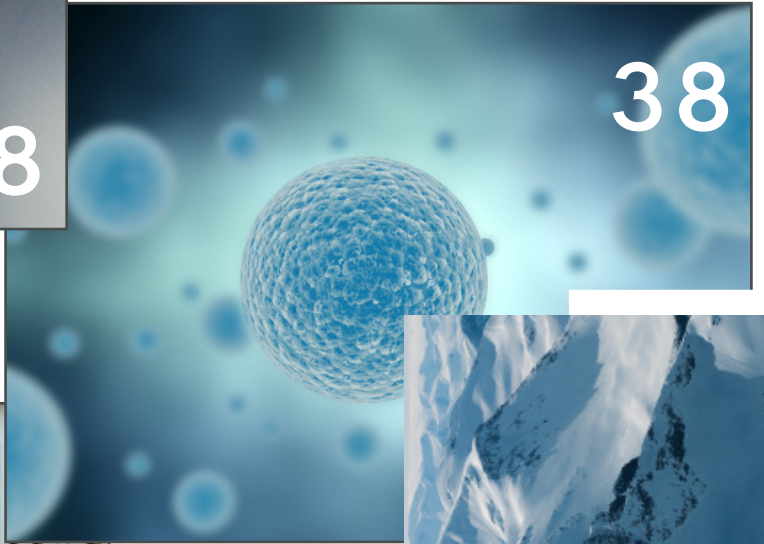
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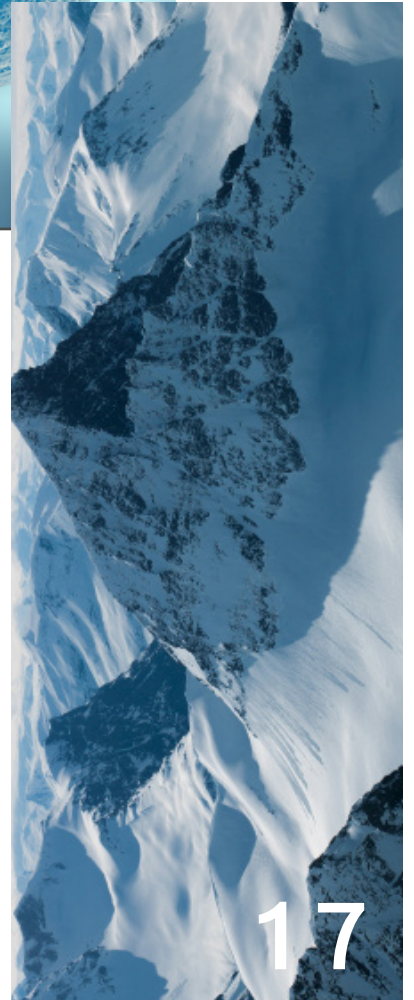
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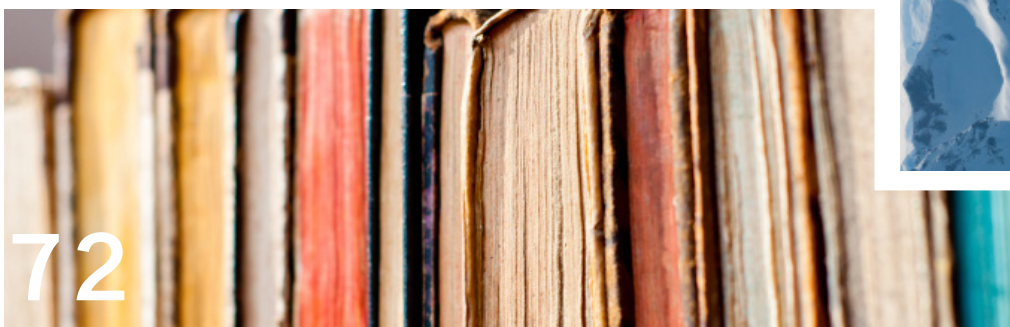
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# RESEARCH



“ Community collaboration in research allows us to uncover the cultures of resistance that stand in opposition to the dominant representation of African-American women.



-Leith Mullings



# The Effect of Music Tempo on the Psychophysiological Measures of Stress

Briana Brownlow



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## Abstract

Music and its influence on stress have been researched extensively (Pelletier, 2004). Specifically, the tempo of music has been identified as a quality of music with a greater role on impacting the stress response than other components of music (Gomez & Danuser, 2007). An experimental study was conducted in order to assess music tempo's role in stress reduction, utilizing psychophysiological measures. This study used a convenience sample of African-American undergraduate students from an all-female, Historical Black College in the southeast region of the United States (N = 102). It was hypothesized that participants who were exposed to slower tempo music, rather than the faster tempo music or silence, would have a significantly lower stress level compared to baseline, as assessed through psychophysiological measures of arousal (heart rate and galvanic skin response). One musical piece was utilized: *Nuvole Bianche* by Ludovico Einaudi, and this piece was manipulated to have a faster and slower tempo. These manipulated versions were used for the slow tempo and fast tempo condition; for the silence condition (control) participants used ear buds. The results indicated that faster tempo music produces a significant increase in participant heart rate, as compared to baseline. Participants in the slow tempo music and the silent condition demonstrated a significant decrease in heart rate. GSR was significantly higher for participants in the fast tempo music and the control conditions. There was no significant change in GSR for participants in the slow tempo condition. This study is important, as it demonstrates music's ability to influence our physiological experience of stress below our awareness. Therefore, essential insight has been gained on music tempo's role in maximizing or minimizing one's experience of stress.

## Introduction

This study investigates whether tempo has a significant impact on one's stress response. More specifically, it was hypothesized that the slower the tempo of the music, the lower the psychophysiological measures of stress would be. This study manipulates the tempo only to ensure internal validity by utilizing only one song selection and solely altering the tempo of that one song. Additionally, the musical piece is both classical and instrumental to better control for preference and familiarity within a college population. Stress is measured through psychophysiological measures of heart rate and GSR. It was hypothesized that slower tempo music, rather than faster tempo music and complete silence, would result in a significant reduction in stress. This study is important and relevant to better understand the role of music's tempo on stress within the specific population of African American female college students. There is little previous research on this specific demographic. Also, by examining the effect of music tempo on stress students may gain a possible stress reduction tool. Therefore, this study provides essential insight on music as a possible tool to better manage stress for African American female college students.

## The Measurement of Stress

Stress is commonly assessed through both physiological and subjective measures of participants. Pelletier (2004) conducted a meta-analytic review of 22 quantitative studies that used music as a means to decrease arousal such as stress. Several studies measured stress/arousal as changes in heart rate, cortisol, subjective anxiety, and blood pressure (Knight & Rickard, 2001; Ellis, 2009). Other studies also included skin conductance along with those measures listed above (Carpentier & Potter, 2007; Gomez & Danuser, 2007). The study by Khalfa, Roy, Rainville, Dalla Bella, & Peretz, (2008) also incorporated the psychophysiological measures of facial muscle activity. The majority of the studies coupled their physiological measures with self-reports and other subjective measures of stress. Moreover, in other studies stress was induced through arousing tasks and/or images and assessed utilizing physiological measures (Yamamoto, Naga, & Shimizu, 2007). Stress is commonly associated with arousal as an indicator of stress and, as a result, stress is commonly measured physiologically. In investigating the effect of music on stress/arousal, current literature utilizes physiological measures coupled with self-reports (Pelletier, 2004). This study utilized only physiological measures, as this study was interested in investigating the impact

of music on the stress response from a biological sphere. This demonstrates how music may have an impact on one's physiological measures of arousal below conscious awareness.

## Quality of Music

Music is a broad and general concept that can take a multitude of diverging forms, as the structural components of music vary. The structure of music is built on various components, such as mode, tempo, rhythm, melody, timbre, accentuation, harmony, pitch, dynamics, and other musical features. These are all used to create unique musical pieces, which can be simplified or complicated by the modifications of these components. Thus, it follows that the quality of music would elicit differing responses of the human mind, especially as it relates to music's impact on stress. The existing literature offers an understanding on the role that the specific quality of music has on stress, as well as the implications of manipulating certain characteristics of the music to alter its impact on stress. Although many studies explored a variety of qualities of music, the majority found tempo as having a significant impact on stress level.

In the study by Gomez and Danuser (2007), the specific structure of the music that contributes to physiological changes, as well as self-reports of experienced pleasantness, was examined. The researchers utilized various musical pieces with different structural forms and had the participants' complete self-reports and they also collected physiological measures from the participants to understand the stress response. The structure of the music (tempo, mode, melody, harmony, etc.) had a greater impact on stress levels, rather than any extramusical factors (emotional perception of music, familiarity). Faster music, as well as music that was accentuated and staccato, increased breathing, heart rate and skin conductance. The findings demonstrated that out of all the various elements of music including, mode, harmonic complexity, accentuation, rhythmic articulation, and tempo, tempo and rhythmic aspects were more significant in determining physiological responses to music (Gomez & Danuser, 2007).

## Type of Music

Music can be characterized by genres, which can be considered categories that include musical

pieces with certain similarities that reflect a specific style of music. Different types of genres are known for having different impacts on the mind and body. Underlying these differences is the structure of the music, which beyond the quality of music, can also impact the human stress response. Current research suggests that different types of music effect stress levels differently.

In the study by Knight, and Rickard (2001), the effect of relaxing music on the subjective and the physiological responses to stress of participants was investigated. Participants were presented with a cognitive stressor task, which was done in the presence of a classical relaxing musical piece or silence. Results indicated that for those exposed to classical relaxing music increases in the physiological measures of stress were prevented (Knight & Rickard, 2001). Relatedly, Jiang, Zhou, Rickson, and Jiang (2013) studied the impact of sedative and stimulative music on the reduction of stress when participants were exposed to a stressor. Findings revealed that sedative music resulted in significantly lower tension and anxiety levels, as measured by self-reports and physiological measures, than those who listened to stimulative music (Jiang, Zhou, Rickson, & Jiang, 2013). Taken together, these two studies suggest that sedative or relaxing music elicited a decrease in stress levels.

In a distinctive study by Thayer and Levenson (1983), the effect of music on the psychophysiological responses was considered within the context of watching a stressful film. Musical scores were added to the soundtrack of an industrial safety film that is a stimulus for stress. The purpose was to construct two musical scores, one with the purpose of decreasing arousal and the other with the purpose of increasing arousal. There were three conditions or versions of the film; one with no music, one with "horror" music (music used in horror films) and one with "documentary" (elevator-type music) music (Thayer & Levenson, 1983). These types of music are unlike other divisions of music, in that they do not fall under an established genre and are not based on the binaries of relaxing or stimulative music. Arousal levels, based on heart rate and skin conductance, were increased when participants listened to the horror music, and arousal levels were decreased when listening to the documentary music, as compared to the control condition (Thayer & Levenson, 1983). This study diverges from others, as it also attempts to increase stress, rather than decrease stress. Collectively, these studies suggest that calm

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and relaxing music have a significant effect on stress reduction, whereas stimulating or horror music can increase stress levels.

## Music Preference

Music preference has been shown to have a significant role on stress reduction, even overriding the influence of other components of music. Radstaak, Geurts, Brosschot, and Kompier (2014) investigated if listening to self-chosen music after exposure to stress improves one's mood, decreases arousal, and aids with cardiovascular recovery. There were four recovery conditions that participants were randomly assigned to – listening to self-chosen relaxing music; listening to self-chosen happy music; listening to an audio book; and sitting in silence. Overall mood significantly improved when listening to self-selected relaxing music or happy music and cardiovascular recovery was significantly faster. The findings indicate that listening to self-selected music is a beneficial technique to improving mood.

Tan, Yowler, Super, and Fratianna (2012), also explored the interplay of preference and relaxing music on stress reduction. Participants rated their preference, familiarity, and degree of perceived relaxation in a musical piece. The results demonstrated that music preference was correlated with the listeners' perception of relaxation in music. Also, there was a significant correlation between familiarity and degree of relaxation (Tan, Yowler, Super, & Fratianna, 2012). All of these studies indicate that music preference has a substantial impact on music's ability to reduce stress, with preference being a strong predictor of higher mood and lower stress. This study does not examine preference and the musical piece selected is instrumental and not genre-specific. Additionally, African Americans' music preference tends to be similar. This was demonstrated in a study on the role of social identity and music preference, where African Americans generally identified with the music preference of energetic and rhythmic, which related to the genres of hip hop, soul, and electronica/dance (Rentfrow & Gosling, 2003). This study, however, utilizes music that falls within the reflective and complex music dimension, which is on the opposite side of the spectrum from energetic and rhythmic. Additionally, the song's tempo has been manipulated to where the original song would not be recognizable. The song choice and the modifications of its tempo aid in controlling for preference. However, preference and individual differences may

still have an influence on one's stress response to the music, as individual differences in preference was not completely controlled for in this study.

## The Use of Music in High-Stress Populations

Much of the existing literature has focused on the effects of music on specific populations that are considered to be under high levels stress. Lai and Li (2011) investigated the specific population of first-line nurses. The participants were randomly assigned to one of two conditions: group listened to self-selected soothing music for 30 minutes during a break, while the other group sat quietly for 30 minutes during their break. Nurses who listened to music had a lower perceived stress level, cortisol, heart rate and arterial pressure as compared to those who only sat quietly in the chair. Music preference also had a significant impact on reducing perceived stress and the decreasing the physiological measures of stress. The results indicate that nurses can use soothing music as an intervention for stress reduction. On the other hand, Tseng, Chen, and Lee (2010) studied the effect of listening to music on the perceived stress and state anxiety of postpartum women. There was an experimental group and a control group, in which the experimental group listened to music at home for at least 30 minutes a day over a two-week time period along with postpartum care. The control group only received postpartum care. Unlike Lai and Li's (2010) study, the study did not find an effect of music on the reduction of stress and anxiety among postpartum women.

The existing literature has clearly demonstrated that, not only can music significantly influence stress levels, but this influence on stress can occur in a variety of ways. Tempo is a specific component that, when manipulated, has a noteworthy influence on stress. Although the existing research is extensive, there is not much literature on college students, another population prone to high stress levels. Knowing music's impact on stress level can be beneficial in assisting students with managing stress and providing them with a tool to do so. The literature establishes that tempo has an impact on stress level, but the methodologies used to establish this fluctuate and allow for confounding variables to influence the results. For instance, the use of different musical pieces that vary across genres, musical structuring, familiarity, etc. could impact one's stress response. Thus, more control can be exerted to ensure that only the tempo of the music

is being evaluated by controlling for all other factors. This study explores the role of tempo on stress reduction, as assessed through psychophysiological measures. This study expands on the current literature by exploring the specific population of African American female college students, through the use of a single musical piece that is only manipulated by tempo and, thus, controls for other variables. It is hypothesized that the slower the tempo, the lower one's physiological measures of stress would be, as compared to the faster tempo group.

## Methods

### Participants

The study used a convenience sample of African-American female, undergraduate students ( $N = 102$ ). The sample size was generated using the online G\*Power power analysis tool. This sample was taken from students attending a private, single-gender Historically Black College in the southeast region. The participants spanned from freshmen to seniors in classification and ranged from the ages of 18 to 22 ( $M = 20$ ,  $SD = 1.372$ ). Participants were recruited via a mass email to all students at the college and were compensated by being put into a raffle with a chance to win one of three giveaways of items from the campus bookstore, as well as being provided with a variety of refreshments at the time of data collection.

### Design

This study used an experimental design. Participants were randomly assigned to one of three conditions ( $n=34$  in each condition) – slower tempo music, faster tempo music or silence (with earplugs) – in order to assess stress reduction through psychophysiological measures. Silence with earplugs was used instead of white noise, because white noise is used as a technique for relaxation and may be a confounding variable. Also, the use of silence with earplugs controlled for any influence noise might have on stress. It was hypothesized that the participants who were exposed to slower tempo music rather than the faster tempo music or silence would have a significantly lower stress level compared to baseline, as assessed through psychophysiological measures.

### Materials/Measures

In order to assess music tempo's impact on the reduction of stress, a Biopac Student Lab system was used to obtain measures of heart rate and galvanic skin response (GSR). The Biopac system

includes data acquisition hardware with universal amplifiers to record electrical signals. The data acquisition system receives the signals from the electrodes and transducers and the data acquisition system connects to the computer, which utilizes the Biopac Student Lab Program software. In order to assess music tempo, the instrumental piece *Nuvole Bianche* by Ludovico Einaudi was used. This piece was selected due to its being instrumental and not genre specific. Lyrics and certain genres has been shown in the existing literature to be confounding variables. Thus, this musical piece controls for that by being instrumental and not adhering to a specific genre, which limits the impact of genre and lyrical influence on one's stress response (→Jiang, Zhou, Rickson, & Jiang, 2013→). Additionally, the original tempo of this song allowed for the tempo to be altered without the song sounding modified. There were two versions of the song, one where the tempo has been manipulated to be slower and the other faster. The tempo of the piece, *Nuvole Bianche*, was modified utilizing the digital audio software application, Logic Pro. The original song's tempo is 120 beats per minute. The fast tempo version was changed to 300 beats per minute and the slow tempo version was changed to 25 beats per minute. The beats per minute for each tempo version falls within the range that is determined to be an either slow or fast tempo, where 120 beats per minute is mid-tempo and below that median is considered slower and above it is faster (Randel, 1986). The musical selection was played through headphones connected to an MP3 player device. For the control condition, ear buds were placed in the participants' ears.

**Demographics:** Demographic information on each participant was recorded before the time of data collection; these demographics included gender and classification.

### Procedures

The participants were recruited conveniently through a mass email to all students, as well as recruiting from places on campus with high traffic. The participants signed up for the study utilizing a Google Form that allowed participants to fill out their demographics and availability and submit those electronically. All participants were assigned a unique identifying number to ensure privacy and confidentiality. Utilizing these numbers and a random number generator, the participants were randomly assigned to one of the three conditions and instructed via text message to come to the lab's



location at their specific timeslot. Before participants arrived, the researcher set up the Biopac system and the music. Upon arrival, each participant was greeted at the door of the lab by the researcher. They were then administered a consent form (Appendix A) informing them of the purpose of the study, any potential harm and/or benefits, and their right to withdraw from the study at any time. Upon participant completion of the consent form, the researcher attached two electrodes to the subject's index and middle fingertips on the left hand, one electrode on the medial surface of the left leg above the ankle, and one electrode on the right forearm at the wrist. The electrode lead set was then connected to the leg and wrist and the GSR leads to the fingertips. The researcher started the Biopac Student Lab Program and performed a calibration and then obtained a baseline for the subject for 2 minutes. Following the collection of baseline measures, the participant was then instructed to insert the earphones and Nuvole Bianche by Ludovico Einaudi, either the slow tempo condition or fast tempo condition, played for 2 minutes. For the control condition, the participant inserted the ear buds and sat in silence for 2 minutes. During this segment of the study, heart rate and GSR was continuously recorded. Upon completion of the experiment, participants were debriefed on the study. Also, the participants were put into a raffle with a chance to win one of three giveaways of items from the campus bookstore, as well as being provided with a variety of refreshments after data collection was completed.

### Data Analysis

In order to examine if there was a significant difference between the mean baseline physiological measures of stress and the mean physiological measures after being exposed to one of the three conditions – slow tempo song, fast tempo song, or silence – a 2 x 3 mixed design ANOVA was conducted. The two factors of this design were time (pre-test versus post-test), and music condition (slow tempo, fast tempo, silence). Significant main and interaction effects were followed by planned comparison t-tests. The statistical analyses were conducted utilizing SPSS.

### Results

A 2 x 3 mixed design ANOVA was conducted to investigate whether participants who were exposed to slower tempo music, faster tempo

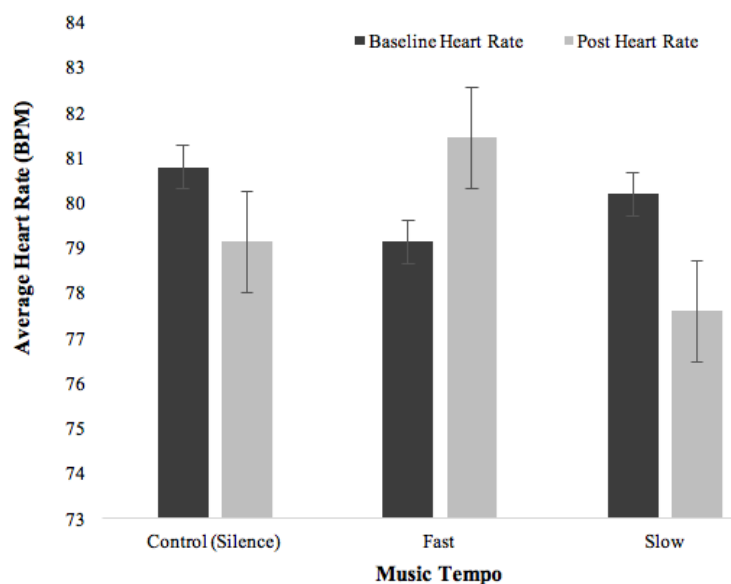


Figure 1. The effect of music tempo on the change in heart rate from baseline to post heart rate. Error bars represent standard error.

music, or silence, would have a significant difference between baseline measures of heart rate and GSR as compared to the measures after exposure to one of the three conditions. There was no main effect of time, indicating that the average baseline heart rate as compared to the post measures of heart rate, independent of the condition, were not significantly different. Also, there was not a main effect for condition, signifying that there was no significant difference in heart rate between the conditions, independent of time condition. However, there was a significant interaction between time and condition for heart rate,  $F(2, 99) = 9.005, p < .001$ , partial eta squared = .154 (See Figure 1). This suggests that there's a significant interaction between the pre and post test measures for heart rate and the specific condition of either fast music, slow music, or silence. To explore this significant interaction, paired samples t-test were conducted as planned comparison post-hoc tests. These results demonstrated that participants exposed to fast tempo music ( $M = 81.440, SE = 9.340$ ) had a significantly higher average heart rate as compared to baseline measures of heart rate ( $M = 79.137, SE = 9.404$ ),  $t(33) = 2.287, p = .029$ . Additionally, participants who listened to the slow tempo music ( $M = 77.600, SE = 9.687$ ) had



a significantly lower average heart rate than their average baseline heart rate ( $M = 80.196, SE = 8.724$ ),  $t(33) = 3.289, p = .002$ . Furthermore, participants in the silence condition ( $M = 79.136, SE = 8.328$ ) had a significantly lower average heart rate as compared to their average baseline heart rate ( $M = 80.778, SE = 9.618$ ),  $t(33) = 2.101, p = .043$ . These findings suggest that compared to the baseline heart rate, heart rate decreases when one is exposed to the slow tempo music, and when exposed to the silence condition, yet increases when exposed to the fast tempo music. However, slow tempo music yielded a greater change from pretest to posttest, compared to the silence condition.

There was a significant main effect of time for GSR,  $F(1, 99) = 38.219, p < .001$ , partial eta squared = .279. GSR values were lower during the baseline period ( $M = 5.038, SD = 2.172$ ) compared to exposure to a condition ( $M = 5.756, SE = 2.102$ ), independent of the music condition. There was a trend towards significance for the main effect of music condition,  $F(2, 99) = 2.498, p = .087$ . An evaluation of the means suggests that GSR values were lower for the silent condition, ( $M = 4.685, SE = 1.024$ ), as compared to the fast tempo condition ( $M = 5.702, SE = 1.298$ ) and the slow tempo condition ( $M = 5.804, SE = 1.713$ ), independent of the time condition.

There was also a significant interaction between time and music condition,  $F(2, 99) = 7.788, p = .001$ , partial eta squared = .136 (See Figure 2). To further explore this interaction, three paired samples t-test were conducted as planned comparison post-hocs. These findings indicated that the average GSR after exposure to fast tempo music ( $M = 6.367, SE = 1.841$ ) was significantly higher than the average baseline measures of GSR ( $M = 5.037, SE = 1.105$ ),  $t(33) = -5.801, p < .001$ . Following exposure to the silent condition, GSR values were higher ( $M = 4.986, SD = 2.146$ ) than the average GSR baseline measures ( $M = 4.383, SE = 1.023$ ),  $t(33) = -3.692, p = .001$ . However, there was no significant difference between the average baseline measures of GSR ( $M = 5.693, SE = 1.943$ ) and post post exposure to the slow music condition ( $M = 5.916, SE = 1.678$ ).

## Discussion

One can gather from the results that the tempo of a musical piece has a significant impact on one's physiological levels of arousal, specifically heart rate and GSR. This implies that music has the ability to influence physiological measures below

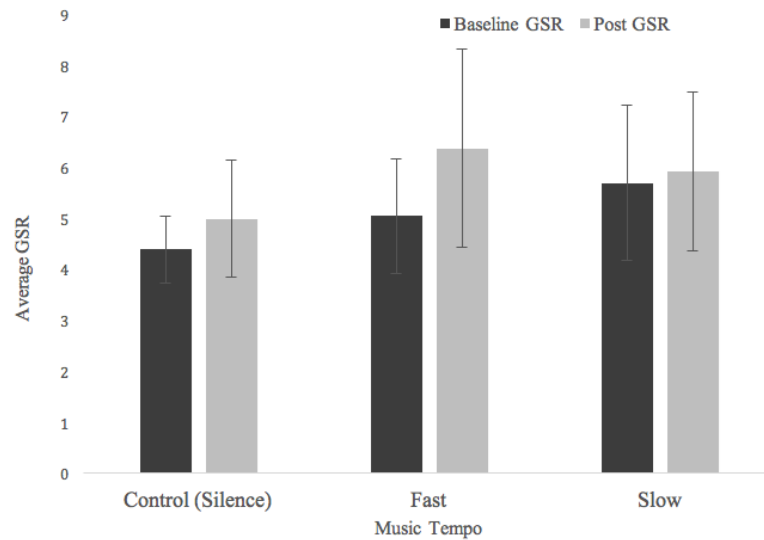


Figure 2. The effect of music tempo on the change in GSR from baseline to post GSR. Error bars represent standard error.

one's level of conscious awareness. Tempo can either maximize or minimize the experience of psychophysiological stress. More specifically, heart rate was influenced by fast tempo, slow tempo, and silence. Fast tempo music was able to significantly increase one's heart rate, while slow tempo music significantly lowered heart rate, and silence also lowered one's heart rate. In a practical sense, this means that listening to fast tempo music increases measures of arousal, which may be indicative of stress, while slow tempo music and silence lower those measures. Slow tempo music, however, elicited a greater reduction in heart rate than silence. Consequently, slow tempo music and silence would be means of lowering these physiological measures, but slow tempo music, based on these findings, would yield a greater reduction in heart rate. This is beneficial to utilizing music as a means of influencing heart rate levels that have an impact on one's experience of stress.

On the other hand, participants in the fast tempo music and silence exhibited an increase in GSR measures across the two time points. GSR is an indicator of skin conductance, which quantifies sweat (Carlson, 2013). Sweating is an indicator of arousal and, based on the results of this study,

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sweating increased for those participants who listened to fast tempo, as well as for those who were in the silence condition. The claim can be made that the fast tempo music elicited an increased arousal response, as the high speed of the music may have created an augmented experience of anxiety or psychological arousal that led to physiological arousal of the autonomic nervous system. Additionally, for those sitting in silence with ear plugs, it is possible that GSR increased due to the use of the ear plugs, and the resulting period of complete silence creating an experience of heightened arousal, as compared to when baseline measures were collected and participants were simply sitting and able to hear the noise of their environment. It is important to note that across all three conditions GSR increased over time from baseline to post measures. This may explain why slow tempo music did not result in decreased levels of GSR, as predicted. GSR is a measure indicative of increased arousal, which is highly responsive to emotions or other external and internal stimuli that lead to increased secretion of the sweat glands. Therefore, GSR is a common measure of autonomic nervous system activity, which is usually indicative of an increase of some kind in secretion of sweat and a tool of monitoring the stress response and anxiety. As a result, GSR is more likely than heart rate to increase based on external or internal stimuli, than decrease (Mendes, 2009). This explains why slow tempo music elicited a slight increase in GSR, but this increase was not as significant as that of fast tempo music or silence. Subsequently, this may imply that slow tempo music was able to lessen the natural increase in GSR when a person is exposed to a stimulus of some kind (i.e. music or absolute silence). GSR increases as a startled response and orienting response, which could both be produced when listening to slow tempo music (Pflanzer, 2013). The slow tempo music may have been less startling or required less orienting than fast tempo music or silence, which is why slow tempo music did not yield a significant increase, although there was an increase in GSR from baseline. Silence may not have resulted in as great of an increase as fast, but still larger than slow, due to the anxiety that ear plugs and complete silence might yield. Thus, a person might experience arousal in their secretion of sweat when exposed to total silence and the use of ear plugs, whereas the slow tempo music may have lessened that arousal. However, fast tempo resulted in the largest increase in GSR, as the upbeat tempo of the music may have resulted in more arousal than

slow or silence. The fast tempo music may have been perceived as more rousing, whereas slow tempo more soothing. Therefore, the findings demonstrating that GSR increases over time, independent of the condition, coincides with the notion of GSR being highly susceptible to increasing rather than decreasing, particularly when a person is exposed to a stimulus that elicits an emotional or physiological response. This accounts for there being no significant difference in baseline measures as compared to post GSR for slow tempo music and the level of increase in GSR that was observed for fast tempo and silence.

This study's findings contribute to the existing body of literature. Music clearly influences physiological occurrences, which in turn can influence psychological measures. The tempo of the music can contribute to one's experience of arousal, which relates to one's experience of stress. Thus, fast tempo music can increase physiological arousal, which could maximize one's perceptual experience of stress by adding the physiological arousal. Slow tempo music, in contrast, can lessen one's physiological arousal, which can diminish the overall experience of stress. Silence is similar to slow tempo music in this way, but slow tempo music has a greater impact in lessening the psychophysiological measures of stress. This can provide insight, specifically to Black women college students, the participants of this study, on the tempo of music they should be listening to, if they are trying to monitor or influence their stress levels. Slow tempo music could serve as a stress reduction tool and fast tempo music could be beneficial if one is trying to increase their arousal to generate eustress, or positive stress, as a means of motivation. Moreover, one can monitor the tempo of music that plays in the background, such as in the car, while studying or working out, to monitor whether that music will increase or decrease their level of arousal.

There were several limitations of this study, which should be addressed in future research. The location of data collection was in an area of relatively high traffic and was also next to a copier machine. Thus, background noises may have interfered with the participants' ability to only be exposed to the music, as well as variance in the ability of the ear plugs to block out all sounds. This limitation could be controlled for by utilizing a location that is sound proof, as well as ensuring that the music is loud enough for each individual participant and that the ear plugs are blocking out sound for each

individual participant. Furthermore, there were many physiological limitations, individually and overall. Individually, this study did not control for participants' previous activity or consumption of certain foods or drinks that may impact heart rate or GSR prior to data collection. Although participants were asked not to use the stairs, participants may have used the stairs prior to entering the building, while others may have just started their day and this was their first physical activity. Additionally, time of day could have impacted the physiological measures accessed. Overall, the Biopac system is sensitive to the application of the electrodes, which are not consistently adhesive. The electrodes are susceptible to losing their adhesive more quickly for skin that is well moisturized. Additionally, heart rate and GSR can be influenced by external factors, such as temperature and humidity, and internal factors, such as medications. Thus, this can result in inconsistencies. These limitations can be addressed by the utilization of more sophisticated tools in acquiring heart rate and GSR, as well as requiring information from participants, regarding anything that could interfere with their physiological responses (i.e. level of physical activity prior to coming, consumption of coffee, list of current medications, etc.). Additionally, one's affinity to fast or slow music may have also served as a limitation; if the participant prefers slow music or fast music or perceives one to be more soothing than the other, this can have an impact on their stress response. Moreover, another limitation was body movement, especially when listening to the fast or slow music. Heart rate and GSR are sensitive to bodily movements and participants were not always sitting completely still; whether that was because of general fidgeting or their moving to the beat of the music. These movements could have contributed to their external level of arousal, especially during the fast tempo condition, when a participant might have been responding to the tempo by making fast movements.

In future research, music affinity to either slow or fast tempo can be further explored. It is possible that one's affinity to fast or slow music may predispose people to have higher or lower heart rate and GSR measures, which can increase or decrease their susceptibility to physiological experience of stress, which can in turn maximize or minimize their psychological experience of stress. Future research could also explore manipulating the tempo of musical selections that fall in other genres, such as rock, hip hop, or pop, to evaluate if these genres

elicit the same results in changes in heart rate and GSR.

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# The Analysis of the African Diaspora in Switzerland

Mikaela Funn



## Abstract

This paper seeks to analyze the critical elements which define the African diaspora in Switzerland. This analysis will focus on the migration trends of African descended people beginning after 1985 and the key themes which affect their experience in Switzerland. The overarching theme of this paper is the social integration of African diasporic people through the lens of racial discrimination. The two critical elements that will be analyzed are the politicization of migration with fearmongering politics and the assimilation of African diasporic people into the workplace in Switzerland. We conducted the analysis through a series of 6 interviews both formal and informal with experts and members of the African diaspora in Switzerland. Many scholarly articles were used as a knowledge base to support the arguments within this paper. The Swiss Federal and Cantonal offices of Statistics were used to collect statistical data on the trends of African diasporic people in Switzerland.

## Introduction

The historical process of colonization has left the relationship between Western Europe and Africa in a troubled state as a result of the historical process of colonization. Migration has become an increasingly important topic of conversation in the world and particularly in Europe given the perceived migration crisis. The more prevalent the issue of migration becomes, the more prevalent the topic of integration should also become given that the two flow hand in hand. Migrants cannot be left in a state of nothingness; something has to be done in efforts to assimilate them into host societies. Due to shifting migration trends from Africa to Europe, African diasporic people face a variety of social barriers in efforts towards integration. There are many state developed institutions and small cultural organizations which seek to ease the integration processes. I have identified the following three critical components that greatly attribute to the success or failure of social integration: racism, politics, and employment.

As a result of the migrant crisis in Europe the politic sphere has shifted toward anti-immigration practices. African migrants are not the source of the problem, but they feel the consequences of these issues. Discrimination against African diasporic people are unique from other forms of prejudice because they are discriminated against based on something they cannot control or change, the color of their skin. Individuals who are discriminated against based on anti-Muslim, and anti-Semitic sentiments can mask their religious affiliation but race cannot be hidden. African diasporic people are also often afflicted by intersectional discrimination

belonging to more than one minority group, for instance being both black and Muslim.

In Switzerland MIPEX integratory statistics show their lowest integration rankings are in anti-discriminatory practices and access to nationality (MIPEX, 2015). This indicates that those two rankings are the most troublesome elements foreign migrants face in Switzerland. During an interview with an African diasporic member of Swiss society, it was stated that the most problematic elements of African Swiss integration were employment and "papers." This statement reflects the accuracy of this MIPEX statistic. In both data and practice, it is shown that Swiss migration policies create an unfavorable environment for foreigners.

The majority of the African diaspora is composed of people who were dispersed as a result of European colonization. However, given that Switzerland was not a colonizer during the period of the trans-Atlantic slave trade, this particular analysis will focus on people who have more recently departed from their ancestral lands, not as a direct result of colonization. This paper will analyze the most critical themes which affect African diasporic people in Switzerland and utilize the African diasporic climate in other Western European countries to answer the question; how do migration trends affect the social integration of African diasporic people in Switzerland in the context of racism, politics, and employability?

### Literature Review

"Prospect of a World Without Race Conflict" by W. E. Burghardt Du Bois analyzes the detrimental role racial intentions play in the modern world. The essay analyzes the topic of race concerning dehumanization and the perpetuity of economic



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inequality, which reinforces the North-South divide. Dr. Du Bois's analysis also looks at the North-South divide in terms of serving as a color line between the white world and everyone else. Dr. Du Bois states "They (western Europeans) thoroughly believe, in accord with inherited prejudice and unconscious cerebration that the peoples of the world are divided into fundamentally different groups with differences that are eternal and cannot be forgotten and cannot be removed. This philosophy says the majority of the people of the world are impossible."

Throughout the essay, he argued that Western Europe expects people of color to only be educated enough to aid in their industrial development, but not to be acquainted with them in more advanced areas of employment and the marketplace (Du Bois, 455). This essay by Dr. Du Bois opened a space for a theoretical example to be used to test the legitimacy of his arguments. Upon reading this essay by Dr. Du Bois I decided to use my analysis of the African diaspora in Switzerland as a practical example for which his themes of dehumanization and the perpetuity of oppression could be applied.

An article published in the International Political Science Review entitled "Multiculturalism and Social Integration in Europe" written by Steven Dijkstra, Karin Geuijen, and Arie de Ruijter played a vital role in the foundation of my research analysis. In this article, the authors introduced and analyzed a variety of contrasting conceptual characteristics of globalization. The most prevalent concepts examined in their article were the relationship between internal solidarity and external xenophobia, deterritorialization vs. localization, and the linkages of trans-migrant identities and multiculturalism. Their analysis of these themes of globalization allowed me to use Switzerland as a practical example for which the prevalence of these concepts could be applied.

The scholarly research on the topic of African diasporic experiences has a lapse of analytical application in regards to Switzerland. Switzerland is a small country. Thus the population of African diasporic people in Switzerland is also small, but significant enough to be recognized. Throughout this paper, I will use relevant scholarly articles and statistics from other Western European countries, all of which were former colonizers to compare and contrast thematic linkages between them and Switzerland, to develop a more accurate understanding of the African Diaspora in Western Europe. While researching this topic there was African diasporic analysis for other western European countries

such as Germany, France, and Italy, but only newspaper and current events articles regarding the African diaspora in Switzerland. Switzerland was not a participant in African colonization as were the other countries previously mentioned. Thus Switzerland is often left out of conversations regarding African diasporic people because they have no historical linkages to arguably the most defining event between Africa and Europe. This gap in scholarly research allowed my analysis to contribute to uncharted territory, Switzerland.

### **Research Methodology**

To conduct this research both qualitative and quantitative data were utilized. Qualitative data was gathered from the Swiss Federal and Cantonal offices for statistics and for information regarding the migration trends of foreigners in Switzerland. This data was used to understand the nationalities of African diasporic people in Switzerland as well as where in the country they resided. These statistics were also used to examine the trends of African diasporic people in and out of Switzerland at various points in time from the period beginning after 1985. 1985 was the starting point for this analysis because it was the earliest date most statistics could provide accurate numbers, and encompasses data from the pre-millennial period of globalization in the 2000's.

Quantitative data for this research came from the analysis of both scholarly articles and interviews. JSTOR was used as a database to access a number of scholarly articles in order to shape the thematic context of this research. Scholarly articles provided information regarding which issues were most pressing on African diasporic communities and gave a knowledge base to grow my research. Given the absence of African diasporic research in Switzerland the scholarly articles utilized for this analysis left me with blank pages to fill. Primary data was used from scholarly articles reflecting first hand African diasporic experiences in Western Europe, as well as secondary sources regarding the observation of integratory practices and political policy analysis. A series of both formal and informal interviews were conducted for this research project. Formal interviews were conducted with expert researchers from large non-governmental international institutions, nationalized Swiss citizens who are members of the African diasporic community, and representatives from cantonal integration offices. Informal interviews were conducted with asylum seekers who reflect a unique component of the Swiss African diasporic community.

Very critical ethical considerations had to be taken during interviews with asylum seekers given that they are a vulnerable population. During interviews with other minority members of the Swiss population careful methodological procedures had to be taken. Asylum seekers stated during interviews that they were okay with their names being given, and having the interview recorded but did not want to divulge their phone numbers. At no point during the interview was a request made for the interview to be terminated. However, during an interview with a Swiss nationalized member of the African diaspora it was requested that the interview not be recorded and his/her name not be published given the sensitivity of the topic. For this interview the analysis of the interview could only be made given the written notes taken during the interview.

## Analysis

### Politicization of migration

The politicization of migration in Europe has impacted the way the general public and public policy is responding to foreigners within states. When issues are politicized, they often become backed by science that may not have existed previously. Thus, the utilization and production of knowledge are created to support or refute policy decisions. The scientification of politics and the politicization of science happen simultaneously. Experts and the public used media as a medium to “enlighten,” and sway support of political decisions (Scholten and Verbeek, 4) . Research legitimizes issues, so society and science are in constant communication. “Science produces evidence rather than factual descriptions (Scholten and Verbeek, 4) ,” science can be picked apart with the precise utilization of evidence, which supports a particular political agenda.

Representatives from the SVP in Switzerland in regard to migration and Islam have stated, “Europe will no longer be Europe, it will turn into an Islamic republic. We are at a turning point, and if we don’t protect our civilization, it will disappear. Yes, I’m attached to the nation. I want to preserve our cultural and historic identity (Amnesty International, 17) ”. Statements such as these invoke a sense of fear in the population in efforts to rally support. The presence of Islam in Europe is growing more slowly now, than it has in the past. By 2030 it is expected that Europe will be 10% Islamic, with current averages at about 6% (Amnesty International, 11) . 10%

of a population is still very much a minority, however politically this statement of slower growth is distorted into simply being growth to justify a political agenda. Research is both used and produced as political ammunition.

“The (perceived) failure of rational efforts to establish a multicultural society and the political saliency of migrant integration have revealed migrant integration as one of the most challenging social issues in the context of a globalizing world where nation states are stills struggling to come to terms with immigration and diversity.” (Scholten and Verbeek, 5)

The politicization of the migration has created the public perception that nations are facing cultural threats. In an interview with a research director from UNESCO one point that was stressed was the validity of perception, it does not matter if there is an actual issue present, all that matters is the fact that people think there is (Crowley 2015) . People and policies are reactive to the perception of public opinion, and this is particularly relevant in the politicization of integration in Europe, where nations are focused on alleviating crises caused by immigration influxes that may not exist. When populations face unwanted external change, they more rigidly protect everything that lies internally. This is prevalent in migrant fearmongering because if politicians can project a national fear of foreigners they can make populations hate what is different and cling to what is old; they create a divide of us versus them.

There is indeed a refugee crisis with Syrian citizens who have been displaced by the Islamic State in Iraq and Syria. However, it is critical to define the difference between refugees and migrants. Refugees are people who have been forcefully displaced out of their homelands and for various reasons cannot return. A migrant is someone who has voluntarily moved from their homeland to an outside location. The conversation on migration in Europe outdates the Syrian refugee crisis, which is a highly recent event. Migration and migrant integration first became a prevalent topic in Europe post-WWII when a workforce was needed in Western Europe, thus attracting foreign populations of people looking for employment (Lynch 1983) . The subject of migration and foreign integration then became a pressing topic again at the turn of the new millennia in the early 2000’s given the prevalence of globalization, and a series of international events.

Major world events and mainly tragedies play a vital role in reshaping perceptions, which alter the normality of policies and practices. For

migration and integration, terrorist attacks act as a catalyst shifting political climates towards protectionism. Examples of these attacks are September 11, 2001, plane hijackings in the United States, which raised tensions in Western Europe because it was an attack on “Western ideology,” a point of mutuality between the two places. There were also terrorist attacks in European cities such as the 2004 Madrid train bombings (Editors of Encyclopedia Britannica 2015) , 2005 London suicide bombings (National September 11 Memorial and Museum 2005) , and the 2015 bombing of Charlie Hebdo in Paris. Those responsible for these incidences were all tied to the Arab world, with suspects being nationalized citizens from North Africa or/and other Arab states, or foreigners altogether. Attacks such as these made migrations seem like a “wicked policy problem,” because it tied migrants and terror together. Fear draws emotion and action out of people. Fear from such events helped push migrant integration to the forefront, and fearmongering politics disaffirmed sentiments towards migrants within states. Us versus them division was created with “us” being the majority race and or religion in a country and “them” being every other minority. This affects those within the African diaspora because they become marginalized within the category of “them” even when they are not associated with the small population of those who threaten the nation.

The Local News Journal reports that the Swiss People’s Party remains the most popular in the country with nationalist policies and strict immigration restrictions, “the SVP is identified as the party with the best competence to deal with asylum seekers and immigration. (The Local CH 2015) ” The SVP’s official manifesto calls for immigration only accompanied with massive integration, as well as the deportation of migrant criminals and those who fail to integrate. The SVP produces problematic and sometimes racist images of black people portrayed as thugs, fully veiled Muslims, and Arab men



Figure 1 (Robinhood.la 2009)

saying stop massive immigration. As displayed in Figure 1 immigrants are represented as black sheep who threaten security. The politicization of migration makes it more difficult for those who desire to migrate to Switzerland to do so, but also for migrants who are already in the country because it questions the lawfulness of their presence in the country.

In 2012, Amnesty International published a report in regard to Swiss politics stating; “these parties have instrumentalized public sentiments of anxiety and disenchantment and have contributed to Islam being identified as the “most significant enemy” by promoting ideologies of ethnic nationalism and the notion of a “clash of civilization” in warning against the “Islamization” of Europe. Their political platforms aim to halt immigration, establishing mandatory integration criteria for migrants and reducing the influence of Islam (Amnesty International, 15) .” Asia and Africa are where most Black and Arabic people reside. The fear-mongering Swiss politics targets these two groups, but these groups do not represent the majority of permanent nor nonpermanent foreign populations in Switzerland. If the political sphere accurately wanted to deter foreign migrants they should be targeting foreign European populations because they represent the greatest numbers of foreigners in the country, not Muslims and Blacks (Conderation 2014).

### Identity and the Politics of Naming

The African community in Switzerland is diverse representing Northern, Eastern and Western parts of Africa. In descending order by the number of permanent and non-permanent residents most African diasporic people in Switzerland come from Morocco, Eritrea, Somalia, Tunisia, and the Republic of the Congo (Conderation 2014) . One of the essential elements in understanding the African diaspora is understanding the diversity that lies within it. “African people are a diverse people and thus (they) are not the same. Particular histories have contributed to particular insights and particular points of view. ” On the African continent prior to diasporic movement these populations of people spoke different languages, had different cultures, and even conflicts between them. For instance in interviews with Eritrean asylum seekers they expressed how nearly all of their lives they had been in conflict with Ethiopians; Ethiopians who they now have to sleep next to in their bunkers (Belay 2001) .

When African descended people migrate to Switzerland they have many differing characteristics beyond the common melanin in their skin. African

migrants are grouped together when in actuality they may have more in common with the Europeans around them than they have with each other. This grouping of brown populations of people also facilitates racial discrimination in Europe by reinforcing and simplifying “us versus them.” When a society defines itself as white as opposed to multicultural or multiethnic those who fall into non-white categories, lack a sense of acceptance within the broader society. “It is obvious that even in countries where there is a greater proportion of Blacks in the population, Black are not automatically accorded recognition or equality (Belay 2001) .” These people are treated as foreigners as opposed to the Nationals that they are.

People migrate for a variety of reasons, and it cannot be assumed that all Africans are in Switzerland or Europe for the same reason. There are more than 73,533 total permanent and non-permanent African residents in Switzerland, with only about 8,352 being asylum seekers and the vast majority of African asylum seekers are Eritrean (OFS 2010) . Most African residents in Switzerland are educated members of the middle class who voluntarily moved, yet are still linked to refugees. Some Africans are nationalized Swiss citizens but are not treated as such in the workforce or political community. In an interview with a former researcher from the University of Geneva it was mentioned that Black people and people of Balkan descent are most highly targeted in discriminatory hiring (Tischler 2015) . It is also critical to be officially documented to obtain work permits, but it is nearly impossible for certain African population to get permanent residential documentation.

Within national communities, minority populations are given names that reflect both where they come from and where they are. Concerning the African diaspora, there are African Americans in the United States, Afro-Latinos in Latin America, Black Frenchmen/French women in France, Black Britons in Great Britain and African Germans in Germany. Black French men and women initially were Senegalese descended people as a result of post-colonial reformation programs. This title now extends all African diasporic people from French colonies (Belay, 266) . The name Black Britons originates from West Indian populations of the African diaspora who were encouraged to migrate to Great Britain during the post World War II labor shortages. The term now applies to both these African descendants and their offspring who are British born and

raised (Belay, 267) . In Germany, there are both Black /African Germans which includes people born in Africa residing in Germany for work or academic purposes, and German natives who are the result of sexual interactions between German colonizers and African woman as well as African American Nationals and German women. There are African-German populations in both Germany and on the African continent. In cases such as Great Britain and Germany, black communities are often left in a state of limbo lacking state and cultural acceptance. For instance, there are no accurate numbers regarding the number of black people in Germany. Black people who have German ancestry are marginalized from the African-German community and marginalized from the German community, further complicating their identities. The same can be found in Great Britain where black people have British ancestry but find themselves marginalized from white British society.

In other parts of Europe, as previously mentioned, African diasporic people have a joint identity that gives them a linkage to their European culture. This dual identity does not exist in Switzerland where there lacks a sense of contingency with the naming of African-descended populations in Switzerland. They are “blacks living in Switzerland” or “African’s in Switzerland” but not Black Swiss or African Swiss (Frolicher-Stine and Mennel 2004) . Both ancestral land and their land of inhabitation do not identify African diasporic people in Switzerland. The naming of black people in Switzerland implies that their presence is only temporary when in most cases that is not the case. Most African diasporic people in Switzerland are permanent residents of the country. This process of naming hinders people from being able to identify with their legal nationality, which may be Swiss. A black person in Switzerland just calling themselves Swiss would not be accepted, it would not be understood although it may be factual.

The complexities of a black identity in Europe constructs a notion of “othering.” People who do not fit the stereotypical idea of what it means to be of European ancestry are lumped together. This is particularly problematic when these groups of people are marginalized and viewed as being less than white citizens. In Germany, it is described that being of mixed heritage is an issue of blood purity. Being Black diminishes a person’s “German-ness”, and strips them of a wholly German identity (Belay, 275) . Given the history of ethnic cleansing



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in Germany, there are massively produced and internalized anti-Semitic and anti-African sentiments.

Aisha Belay in her article "The African Diaspora in Europe: African Germans Speak Out" accurately expresses the experience of discrimination Africa diasporic people face in stating; "yet it is true that social dislocation is sometimes experienced by African Germans because of their color and historical origin. Often, because they are easy to identify by their complexion, the African Germans are marginalized socially if not discriminated against outright as the African American might be in the United States (Belay, 275) ."People cannot cover up being black. Thus they are easily targeted and discriminated against for something they have absolutely no control over. People do not choose to be black or white or any other race, and should not be socially inferior or superior because of it.

Within the construction of identity there lies the concept of intersectionality between race, religion, and even gender. People may enjoy various dimensions of majority privilege even within a minority category. For instance regarding religion, one may be black but also a Christian thus they benefit from the normality of the Christian majority even while being a black minority. However, being both African and Muslim further marginalizes African diasporic populations in Switzerland making them more highly targeted by fear mongering politics and the media. After the events of 9/11 in the U.S. and other terrorist attacks throughout Europe, anti-Muslim prejudice grew. Post 9/11 anti-Muslim sentiments were highly observed in Belgium, Bulgaria, Estonia, Finland, Greece, Lithuania, Malta and Romania (O'Dea 2012) . In Switzerland, it is reported that one-third of the Swiss population view headscarves as a form of humiliation for women (Amnesty International, 12) . MIGROS is one of the biggest companies in Switzerland and the largest grocery chain in the country. In 2004 they tried to implement a ban on the wearing of headscarves but instead implemented a mandatory uniform so employees who directly interact with clients cannot wear head scarves. COOP another large grocery chain has a similar policy in efforts uphold a "corporate image." Policies such as these by employers are subtle acts of suppressing Muslim cultural elements.

Of the African countries with the highest populations of migrants in Switzerland, 4 out of 5 of them are predominately Muslim states. Morocco is 99% Muslim and 99% Arab, Tunisia is 99% Muslim and 98% Arab, Somalia is predominately Sunni

Muslim, and Eritrea also has a Muslim majority (World Factbook 2015) . The only exception is the Republic of the Congo which is 33%, Christian. Switzerland is 5.7% Muslim, and 12% of Muslims in Switzerland have been granted Swiss citizenship (O'Dea 2012) . The majority of Muslims in Switzerland are ethnically Yugoslavian, whereas the majority of Muslim in France, Belgium, and Spain are of Moroccan, Tunisian, Algerian, and Senegalese origin. Given that the majority of foreign migrants in Switzerland come from other parts of Europe, numerically it is not surprising that most Muslims in Switzerland are non-African because they represent only a percentage of an already small percentage of African descended people in the country. However, within the Muslim population in Switzerland over 100 nationalities are represented (O'Dea 2012) .

Within the school system and the workplace Muslim populations face the greatest number of challenges. Statistically, Muslim students report discrimination more often than non-Muslim students. In a 2012 Amnesty International report they recounted the testimonies of Muslim people in Switzerland and the discrimination they experience. There was the story of Mr. Ahmed, a Swiss citizen originally from North Africa who was an employee of a particular institution for 15 years, however throughout the entirety of his career he kept his Islamic faith a secret. His colleagues had growing suspicions of his religious affiliation and even made comments comparing him to Osama Bin Laden, a well know Islamic terrorist. Mr. Ahmed had taken a few sick days off work and a couple of days after returning he was fired. He did not want to take his case to a trade Union because he thought it would be ineffective and thus only consulted a lawyer under the notion that his dismissal was the result of racial and religious prejudice (Amnesty International 2012) .

During an interview with a Swiss entrepreneur of Cameroonian descent, he recounted stories about how discrimination had impacted his life in Switzerland. He expressed how in Switzerland you do not see racism; you only see its effects. For instance, racism is not an issue regarding active acts of aggression, but in passive forms such as the absence of black people in prominent positions in the workplace. He expressed how employment is one of the greatest obstacles for black people in the country, and explained that even though he has his "papers" and is legally a nationalized Swiss citizen he still gets passed off as if he was a stateless person in the country. The condemnation of black people in



the workplace had even affected him to the point where he felt it necessary to resign from his position at a job (Ekah 2015) .

In 2010 the UN Committee on Economic, Social and Cultural Rights recommended that Switzerland adopts more thorough anti-discriminatory legislation because there are numerous legislative gaps in that regard (Amnesty International, 50) . In 2008 the CERD stated that in Switzerland there was “a lack of substantial progress made by the state party in combating racist and xenophobic attitudes towards some minorities, including black persons, Muslims, travelers, immigrants and asylum seekers (Amnesty International, 46) .” 178 cases of discrimination were reported to the CERD from Switzerland in 2010. The small number of filed reports is not a reflection of the absence of discrimination, but can more accurately be attributed to the lack of reporting as a result of unawareness of the complaint system. There is also a gross lack of reporting incidences related to employment discrimination due to fear of being blacklisted from job opportunities altogether. Failing to acknowledge the existence of racism in a country does not make it cease to exist, nor does calling racism anti-migration policy make it any less discriminatory. Cantonal integration offices sponsor a variety of programs in efforts to combat racial discrimination and build cultural awareness. However, a representative from a cantonal integration office states that their efforts are effective, but racism could be more efficiently alleviated if greater national policies were condemning discriminatory acts, which would give cantonal anti-discrimination efforts more validity (Tischler 2015).

**Migration Crisis**

There is a distinguishment to be made between a migration crisis and a refugee crisis. The Syrian refugee crisis is very real, but still a relatively small crisis in Europe when compared to other Middle Eastern neighboring countries. There have been 4 million Syrian refugees registered in Egypt, Iraq, Jordan, Turkey, and Lebanon (Pappas 2015) . Compared to 264,000 asylum applications received by 38 different European countries . Regarding migration, the majority of foreign migrants in Switzerland are from other parts of Europe. For nearly thirty years in Switzerland, Europeans lead trends of refugees. Historical events represent shifting trends in the nationality of refugees in Switzerland, and still, the vast majority of refugees in Switzerland come from other parts of Europe. It was not until 2010 that the number of African refugees surpassed the number

the Asia refugees in Switzerland, that number only differed by a few hundred, and was grossly less than those of European refugees. In 2010 there were 33,450 combined EU and non-EU European refugees in Switzerland compared to 8,352 African refugees in the country (OFS 2010) .

The growing migrant tension can be attributed to a “blackening” of the migrant population. European migrants, for the most part, blend in with the predominately white Swiss population. Few distinguishing characteristics make them stand out amongst other Swiss citizens. With past African migration trends coming from Northern Africa where many people do not even consider themselves to be “African” they have fairer skin, straighter hair and or overall more aesthetically aligned with the broader Swiss population than people from other parts of Africa are. However, in 2005 there was a significant shift in African refugee trends decreasing the number North African refugees present in Switzerland and increasing the number of East Africans present in Switzerland. Eritreans represent the vast majority of this new population of African refugees in Switzerland with 5,137 asylum applicants (OFS 2010).

The concerns on migration can also be attributed to unwanted shifts in the integration process of migrants in Switzerland. As stated previously before circa 2006 North Africans are the most highly represented group of Africans in Switzerland. Linguistically African migrants are a reflection of colonization in their countries, so the European languages spoken are usually those of their former colonizers. The most prominent North African nations in Switzerland are Morocco, Tunisia, and Algeria all of which we colonized by French. Thus, French is one of the official languages in each of these countries. The majority of permanent African migrants residing in Switzerland live in Canton Geneva closely followed by Canton Vaud (see Table 1) (OFS 2010). These are

Permanent Foreign Migrants in Switzerland		
Canton	African Permanent	Total Permanent
Geneva	15,944	178,991
Vaud	13,545	220,929
Zurich	10385	330,757
Bern	7,845	131,702

Table 1 (OFS 2010)

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both francophone Cantons, so most North African migrants are linguistically aligned with that element of Swiss culture. The ability to communicate with the world around you is a major contributing factor towards successful integration. If a person knows the language of their host countries they are employable, they can be educated; they can socially integrate into society. This facilitates integration processes for such populations.

As trends began to shift in 2006 given the war between Eritrea and Ethiopia, the number of Eritreans and Somalian in Switzerland increased, and the ease of integration processes also changed (World Factbook 2015) . In an interview with an Eritrean migrant, he said that when and if his asylum was granted the first step of the integration process would be enrollment in language courses, then employment. Non-French speaking African populations are a greater burden to Swiss society because the state has to do more to integrate them. I was able to communicate with this Eritrean man because he spoke English not because he spoke French. This is an unsurprising fact given that the Italians and British occupied Eritrea for decades (World Factbook 2015) . The Eritreans in Gland, Switzerland are a close-knit group because, for the most part, they can only communicate with each other. When speaking with this man and inquiring about racism and discrimination in Switzerland he said he was unable to answer that question accurately for two reasons; one being that he has only been in Switzerland for a relatively short period, and the other being that he cannot communicate with the Swiss and the Swiss cannot communicate with him, so they have minimal interaction with each other.

In 1989 there were 7, 486 African migrants in Geneva. In 2012 there were 17,239 this increase from 1989 to 2012 happened gradually, increasing by about 400 people each year for 23 years (World Factbook 2015) . There were influxes and refluxes regarding with countries more people were coming from, but the overall trend remained steady (Conderation 2014) . There was not a significant increase in migration patterns at any point during the turn of the new millennia, only a change in perspective. The migrant and refugee crisis is not problematic concerning numbers in Switzerland, but problematic regarding efforts. It requires greater efforts from the Swiss to accommodate new migration trends than it has in the past. In an interview with a nationalized Swiss entrepreneur of Cameroonian descent, he expressed that one of

the greatest contributing factors towards successful integration are the social skills a person has before they migrate. If a person has some knowledge of the host language before they migrate they are more easily integrated if a person is employable and or educated before they migrate they are more easily integrated etc.

In Europe post World War II there was an immigration influx. The influx began with migrants from Southern Europe then extended globally. The migrant workers who moved from different parts of Europe were more easily assimilated into host cultures than their migrant counterparts from other areas of the world. In this post-war period "in many cases, the cultural adjustment was a one-sided phenomenon, to be practiced by the immigrants but not by their host nations. (Lynch, 577) "The shifting nationalities of migrant and refugee populations makes integration harder on the Swiss. A representative from a Swiss Cantonal Office expresses that language plays a vital role in integration, and the influx of Eritrean people is difficult because they require language classes, and they simply do not have the resources available to meet the demand (Tischler 2015) . The absence of language course also halts the process of employment, because you must be able to communicate to get a job. The real crisis lies in the lack of effective integration processes to accommodate new migration trends, not necessarily a crisis caused by a massive migrant influx.

### **The Presence of the African Community**

There is a power that lies in the unity of people with a shared vision of progression, "the strength of all of our visions and the weaponry born of a particular experience makes us a powerful force and can be used to improve the sociopolitical and economic conditions of African people globally (Belay, 265) . "

Throughout Europe, there are a variety of African diasporic networks which aid African migrants and strengthen their diasporic community. In Switzerland, there is the Swiss African Diasporic Council which connects African firms, people, and supports the community through cultural, and empowerment forums. However, the issues of integration are reflected as a lack of cohesion for integrated networks. In Switzerland, German, French, Italian, and Romansch are the four official languages. When African migrants come to Switzerland, they may already speak one or more of these languages, or they simply learn whatever language is spoken within their particular canton. The lack of linguist

cohesion in Switzerland serves as a hindrance to diasporic communities. For instance, the African Diaspora Council of Switzerland has its headquarters in Bern where German is spoken, thus members coming from Canton Vaud or Geneva for example who have only been assimilated into Swiss francophone culture cannot communicate with other members of the African Council unless a translator is present. Within multicultural spheres, people are more closely connected to those whom they can communicate with, so in voting processes for instance people are more inclined to vote for the candidate who they can speak to and more thoroughly understand.

Many African cultural networks are serving a variety of purposes but in regards to integration they can only do so much to help. Local community and cultural groups simply do not have the same magnitude of resources that state funded programs have to be effective. It may seemingly be an easier process to integrate one African migrant socially with the assistance of others who have come before them, but that is not the reality in most cases. During my first interview with a nationalized Swiss citizen who was originally from Cameroon, it was stated that becoming too dependent on African networks in Switzerland can be a hindrance to integration and employment (Ekah 2015). To integrate into a country, you have to interact with the people and community around you. He explained that people in Switzerland are typically reserved, so you have to talk to them, they will not come to you. This is particularly important in regards to employment. African migrants have to establish a network far broader than the African diasporic community to find work suited for their qualifications, rather than settling for more easily accessible entry-level positions. In Switzerland who you know is more powerful than what you know concerning opportunities. Settling within the nest of an African diasporic network can be socially comforting, but obtaining gainful employment it is vital for African migrants to extend their horizons.

### **Europe needs migrants**

Europe as a whole is a declining power with an aging population. Using Switzerland, Germany, Belgium, France and Italy as a sample of Western Europe, the average ages of citizens in these countries are nearly double the ages of the average African migrating there. The mean ages are as follows; Switzerland, France and Belgium all 41 years old, Italy 45 years old, and Germany 46 years old.

Comparable to the mean ages of the five most prominent African populations in Switzerland; Somalia 18 years old, Eritrea 19 years old, the Republic of the Congo 20 years old, Tunisia 31 years old, and Morocco 38 years old. These numbers reflect the fact that the average European is beyond childbearing age, and thus their population growth is dwindling. Contrastingly, the Africans moving to Europe are fertile and in their working primes. Europe needs working taxpayers to keep its pension systems afloat, and a new diverse population can also contribute new ideas and innovations. Just as immigration accelerated in Europe post-WWII in efforts to repopulate the workforce, it again needs to accelerate to maintain the living quality and power most Europeans have grown accustomed to.

### **Conclusion**

Despite the numerous obstacles facing black people, one of the greatest defining elements of the African diaspora is the presence of resilience. Resilience has been a shared and recurring theme in my interviews and research. In a French documentary "Dans le Peau d'un Noir" during a focus group, one man stated that the key to prosperity as a person of color is not to play the role of a victim (Kim 2007). Even in the face of blatant injustice one cannot be victimized and internalize inferiority. In an interview with a black entrepreneur in Switzerland, it was stated that black people simply cannot give up, they have to keep pushing and fighting for better, for what they deserve (Ekah 2015). Through the testimonies and statistics mentioned throughout this paper that is the most key element. Forms of injustice are always present to some extent, but people cannot succumb to them. African Diasporic people cannot stop migrating in hopes of creating a prosperous life because of unsubstantiated prejudice. One of the most dynamic elements of social norms is that they are always shifting and evolving. Just as globalization shifted political conversations towards migration, other global trends will shift the topic of conversation and focus elsewhere. Early 21st-century terrorism made Muslim and North African populations a priority of fearmongering politics, just as communism and Eastern European ideology were used to scare populations of people for various political and global agendas during the WWII period. Everything will revolve as long as people hold fast in their efforts towards progression. As Dr. W.E.B Du Bois argued, there is a color line that divides the

world by opportunities, and the African Diaspora in Switzerland is a reflection of this (Du Bois 1944) . Even when migrant populations of color transcend global barriers of development, they are still marginalized as lesser citizens in European communities. African Diasporic people in Switzerland are not afforded the same opportunities as their white counterparts and have to work harder to achieve less. However, it is the resilience of the African Diaspora to be victors and not victims that put pressure on these unfair practices and hopefully gives birth to a new wave of cultural inclusion in both Switzerland and the broader global community. Integration institutions and policies must remain analytical and progressive in their policies. Anti-migrant attitudes of not wanting people in the country do not make immigrants go away. Thus, centers for integration must remain active in building their resources to adapt to migration trends. People become a greater burden to society when they need to be supported by the system. "The interchange of information, ideas, and policies is hindered by still largely impermeable national and regional intellectual styles (Lynch, 578)." Both African diasporic communities and Switzerland could benefit from better integration practices that effectively and efficiently assimilate migrants into society, and into the job market. This evolution could create a bridge for the exchange of ideas and information that pushes society in its entirety towards progress.

#### Abbreviation List

MIPEX- Migrant Integration Policy Index

WWII- World War II

SVP- Swiss Peoples Party

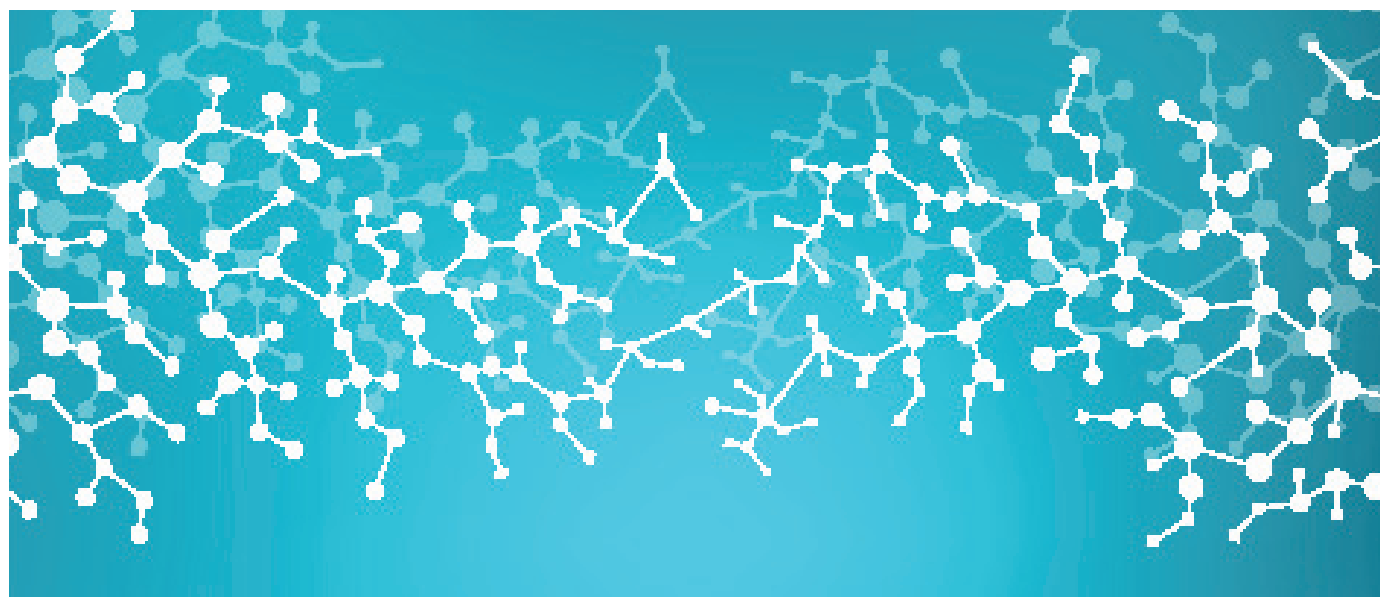
BAMF- Bundesamt für Migration und Flüchtling

CERD- UN Committee on the Elimination of Racial Discrimination

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# The Effect of Apocynin on the APOE-1 Gene in the African American Population

Chelesa Fearce



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## Abstract

The prevalence of hypertension is significantly higher in African Americans in comparison to other populations. Hypertension is a condition in which there is increased blood pressure in the arterial walls, which can lead to serious health problems such as heart attack and stroke. The African American population has been shown to have a higher risk of developing kidney failure than Caucasians due to hypertension. Apolipoprotein (ApoL) encodes the apolipoprotein L-1 protein (ApoL1) and has been shown to be prevalent in the African American population. Apocynin is a known inhibitor of NADPH oxidase (NOX), which catalyzes the reduction of molecular oxygen to the superoxide and has been shown to prevent the formation of reactive oxygen species, which decreases arterial stiffness in deoxycorticosterone acetate-salt-induced hypertensive (DSH) rats. A reduction in the amount of reactive oxygen species leads to a decrease in apoptosis. We hypothesize that because apocynin causes a reduction in reactive oxygen species, then it will cause inhibition of the PI3K/Akt pathway. In order to test this hypothesis, twenty-four male DSH rats were treated with a low salt diet (0.3% sodium chloride) with apocynin and aldosterone or a high salt diet (8% sodium chloride). The kidneys of the rats were homogenized and tested for the presence of APOL-1 using ELISA and Western Blot. The expression of NOX4 (an NADPH oxidase subunit) was also tested using ELISA. The rats that were fed a low salt diet exhibited the APOL-1 protein. In the presence of high salt or aldosterone, ApoL1 expression was completely inhibited. The expression of NOX4 was also seen in all of the rats (n = 24), but was higher in the rats fed a low salt diet (n = 12). Apocynin did not affect NOX4 expression, but did increase the production of reactive oxygen species. ApoL-1, along with apocynin, have an effect on Akt-signaling. However, instead of reducing the amount of reactive oxygen species, apocynin appears to be inhibited in the presence of the ApoL-1 protein and upregulates the Akt pathway. Future tests will involve identifying receptors in the Akt pathway that are affected by apocynin, which could lead to conclusions about the effect of apocynin and oxidative stress on the kidney.

## Introduction

### Disparities in the Prevalence of Hypertension in the African-American Community

The prevalence of hypertension is significantly higher in African Americans (AA) when compared with other populations. Hypertension is a condition that causes increased blood pressure in the arterial walls, which can lead to serious health problems such as heart attack and stroke (Kučera et al., 2015). If left untreated, hypertension can lead to chronic kidney disease (CKD). CKD is a slow occurring disease in which the kidneys lose function over a sustained period of time. The final stage of CKD is end-stage kidney disease (ESKD), which is the complete loss of function in the kidneys (U.S. National Library of Medicine, 2013). This is a permanent condition in which the kidneys are unable to filter waste and excrete excess fluid (Kao et al., 2008). The African American population has been shown to have a higher risk of developing ESKD from CKD than Caucasians (Petrônio et al., 2013).

### The Role of APOL-1 in Hypertension in African Americans

Recent studies have shown that the abundance of hypertension in African Americans can be caused by several factors. Lower socioeconomic status, lack of access to healthcare, and higher systolic blood pressure are factors that lead to renal failure in the African American population. Myosin heavy chain 9 non-muscle (MYH9) is a gene that codes instructions for the synthesis of myosin-9. This gene aids in cell movement, cell shape, and cytokinesis. Previous studies using mapping techniques identified a peak on chromosome 22q13, which includes MYH9, that causes an increased risk of developing ESKD in African Americans. For many years, MYH9 was thought to have been the cause of hypertension in AA individuals. However, recent studies have shown that the gene responsible for this missense mutation is located near the MYH9 gene and is actually the apolipoprotein (APOL). APOL encodes the apolipoprotein L-1 protein (APOL1), which lyses trypanosome and is prevalent in autophagic pathways. More importantly, it has been shown that African Americans who have roots in the western parts of Africa have the apolipoprotein L1 gene. This gene is

prominent in West Africa due to the occurrence of human sleeping disease, Trypanosomiasis, in that area. Human sleeping disease is caused by a parasite of the species *Trypanosoma* that is lysed by APOL-I. As a result, APOL-1 plays a significant role in the reduction of the human sleeping disease. However, African Americans living outside of Africa do not have the same exposure to human sleeping disease but still carry the gene for APOL-1. Thus, understanding the mechanism of action of APOL-1 can help lead to preventative methods against renal disease.

## Research Question and Hypothesis

The PI3K/Akt signaling pathway is a critical pathway in the regulation of metabolism, growth, proliferation, survival, transcription, and protein synthesis. Akt is a mediator of cell survival through direct inhibition of pro-apoptotic proteins. Disruptions in this pathway is implicated in several diseases, including cardiovascular disease. Cardiovascular disease is the number one cause of death associated with high blood pressure. We hypothesize that because apocynin causes a reduction in reactive oxygen species, then it will cause inhibition of the PI3K/Akt pathway. The presence of ROS activates the PI3K/Akt signaling pathway. Therefore, we believe that the reduction in ROS caused by apocynin may interfere with the functioning of the PI3K/Akt pathway. By understanding the mechanism of action of apocynin, we can determine how a reduction in oxidative stress can affect hypertensive individuals. These findings can lead to conclusions about how reactive oxygen species can cause an increase in hypertension and a reduction in the number of phagocytes in the kidney. It has been proposed that a reduction in the number of phagocytes can occur, due to apoptosis of kidney cells caused by the prevalence of reactive oxygen species. This can lead to better understanding of the APOL1 gene and its mechanism of action in the kidney.

## Materials and Methods

To test the hypothesis, we examined the effect of dietary salt (environment) and inhibition of ROS on ApoL1 expression in Dahl salt-sensitive (S) rats. The Dahl S rats were fed a low salt (0.3% NaCl) or a high salt (8% NaCl) diet alone or in the presence of apocynin, an NADPH oxidase inhibitor, for four weeks. Additionally, the low salt group was fed aldosterone

to assess reabsorption of sodium. The amount of protein in the rats' urine was measured using protein assays at a 1:1000 dilution. Western Blots were then conducted to determine if the APOL-1 gene and NOX4, an NADPH oxidase subunit, were present in the rat. An ELISA was done to assess the oxidative stress.

## Results

Figures 2 and 3 indicate the low salt group expressed both the ApoL1 protein and NOX-4. Low concentrations of salt could induce upregulation of the protein due to salt sensitivity that is prevalent in African America. Figures 2 and 3 indicate that aldosterone may have caused reabsorption of sodium in the kidney. Therefore, less salt would be excreted and more would be retained in the kidney. Additionally, these figures also indicate that the presence of apocynin does significantly decrease the presence of ApoL-1. Lastly, the rats fed a high salt diet experienced the same results as the rats fed a low salt diet with aldosterone. This may be due to homeostatic regulation via antidiuretic hormone, which increases water reabsorption and increases sodium excretion.

Figure 4 is a combination of an ELISA performed using VEGF, TNF-alpha, IL-6, and MCP-1. These cytokines induce Akt-mediated signaling. Though none of the results were significant, the increase in the cytokines in the rats fed a low salt diet combined with ldosterone and apocynin indicate that the functioning of apocynin may be inhibited in the presence of the ApoL-1 protein. Instead of decreasing the amount of ROS, they may accumulate in the hepatocyte, which is indicated by the increased cytokine activity of this particular group.

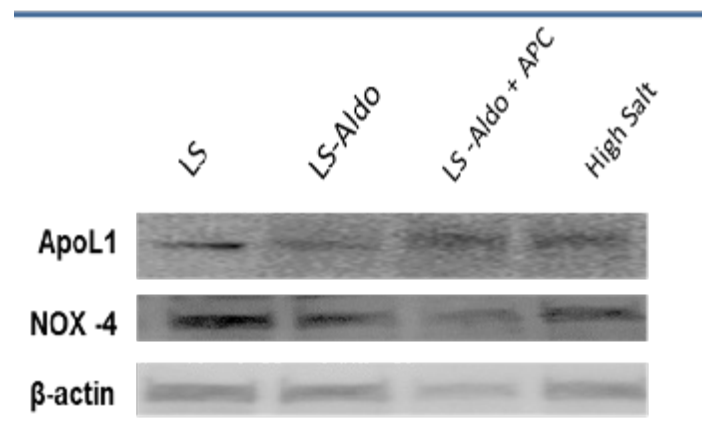


Figure 1. A representative western blot measuring ApoL1, NOX4 and b-actin (housekeeping) proteins.

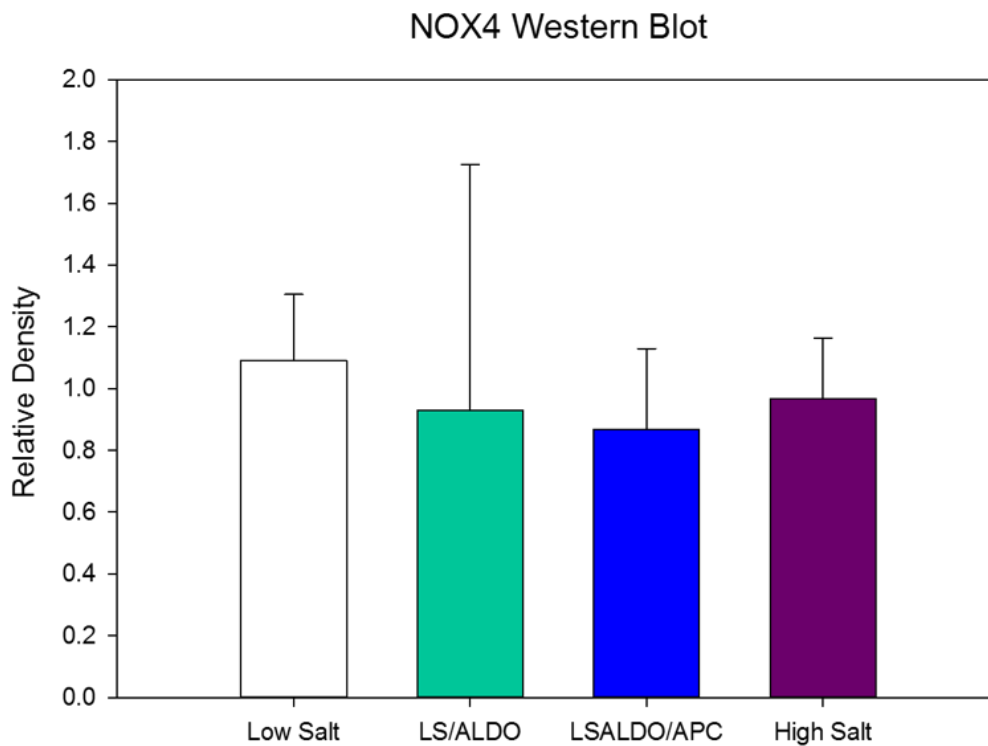
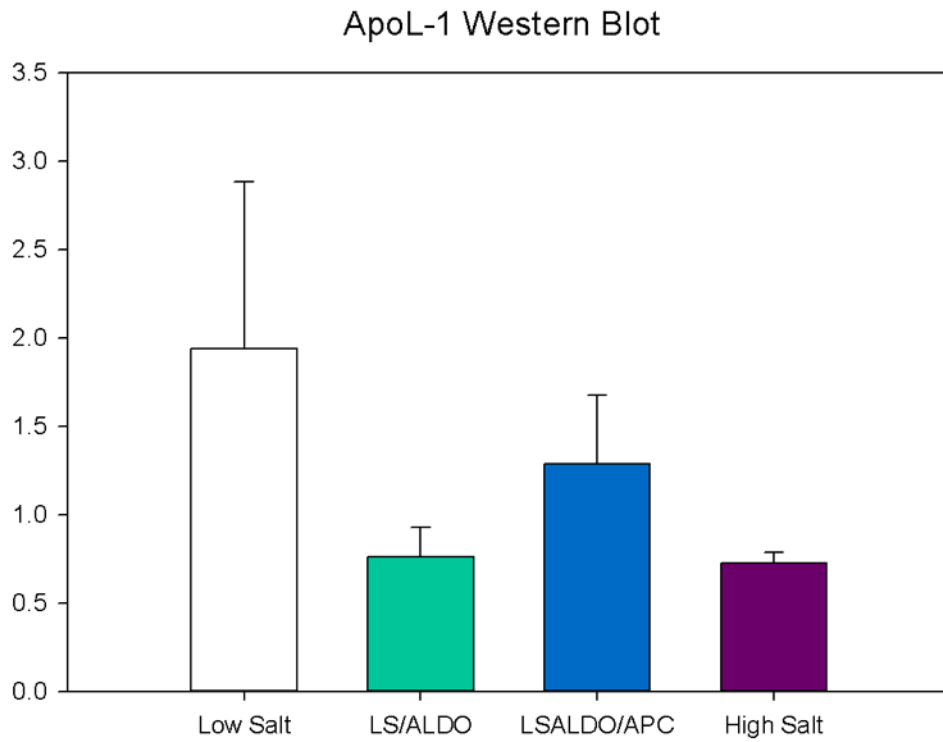


Figure 2. The above plots show the Western blot analysis for ApoL1 and NOX4.

### ApoL-1 Protein Expression using ELISA

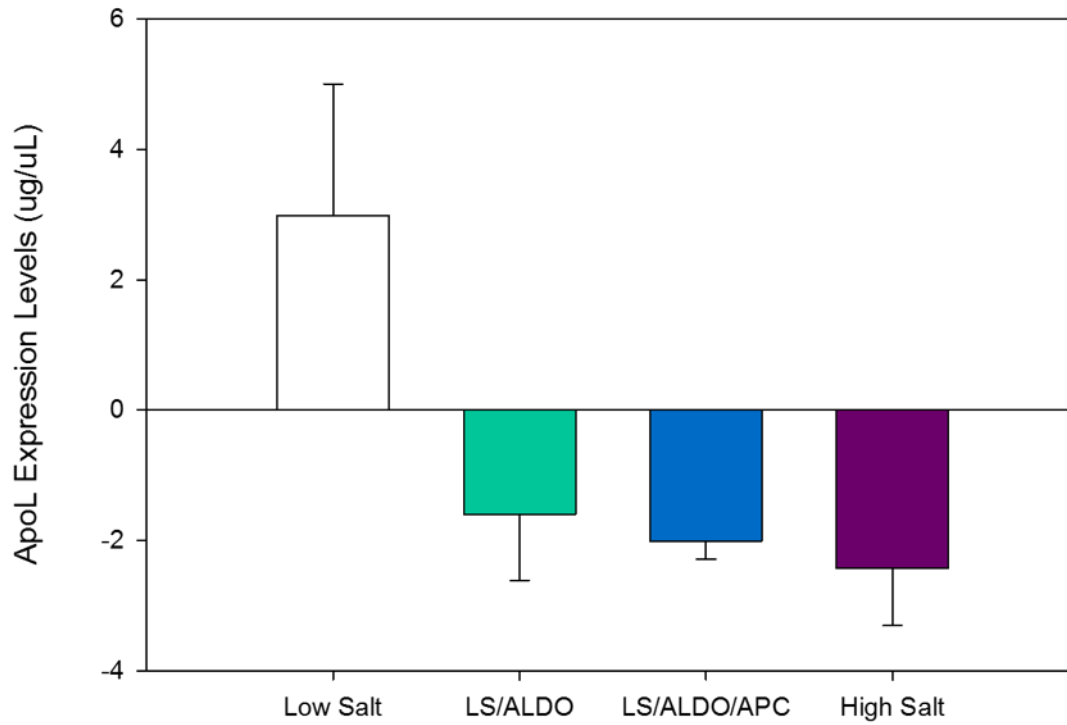


Figure 3. Analysis of ApoL1 expression using ELISA. \*LS/ALDO/APC (\* represent  $p < 0.05$  when compared to Low Salt group).

### IL-6

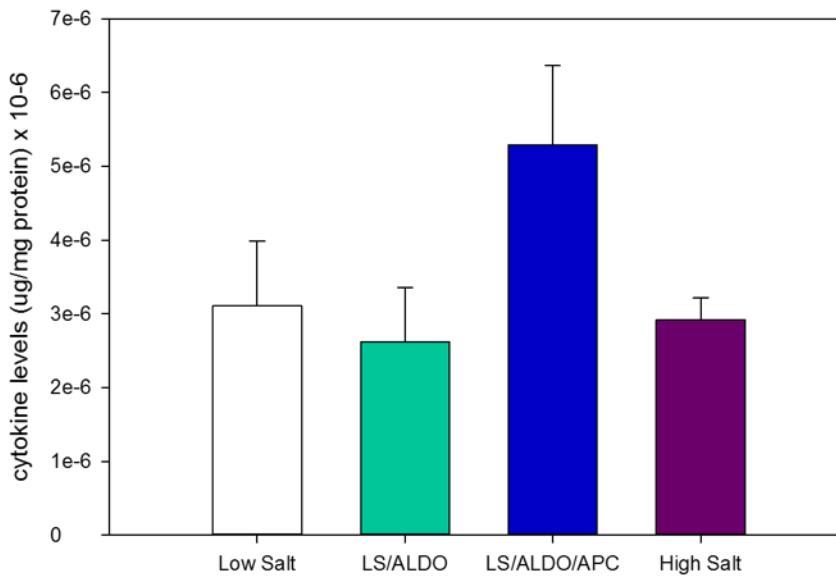


Figure 4a

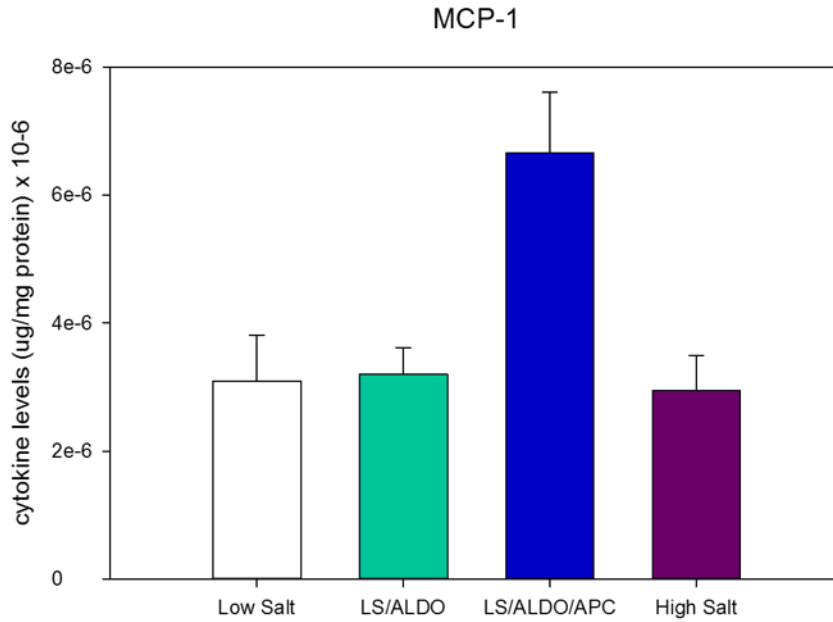


Figure 4b

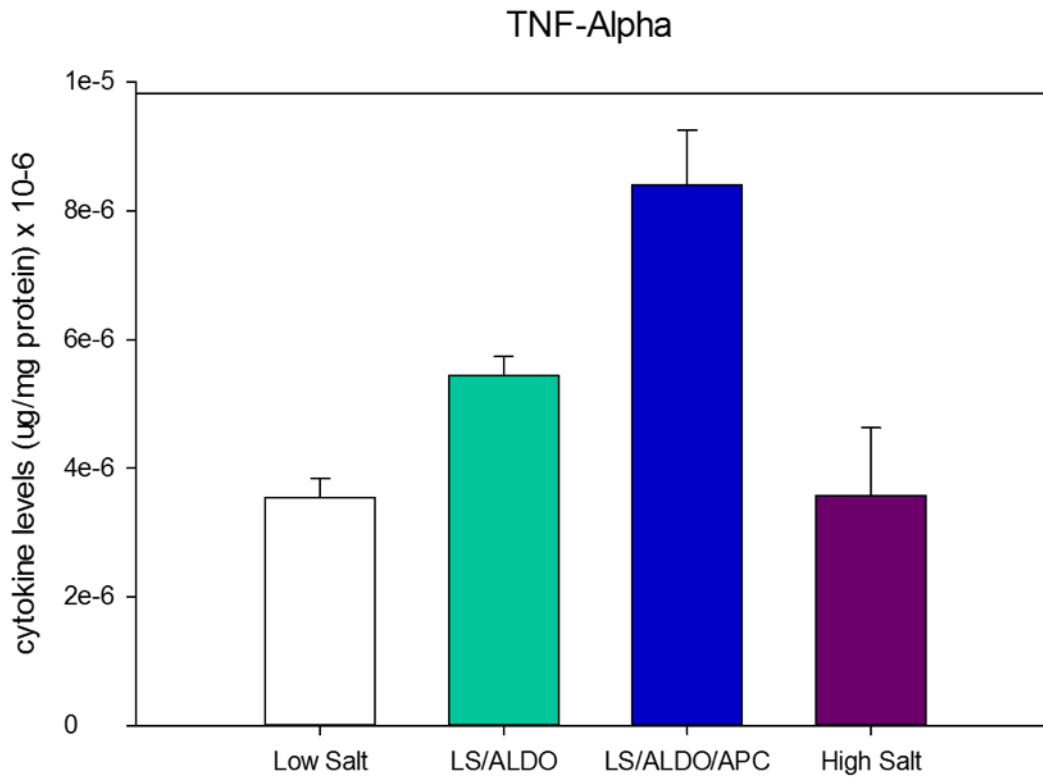


Figure 4c



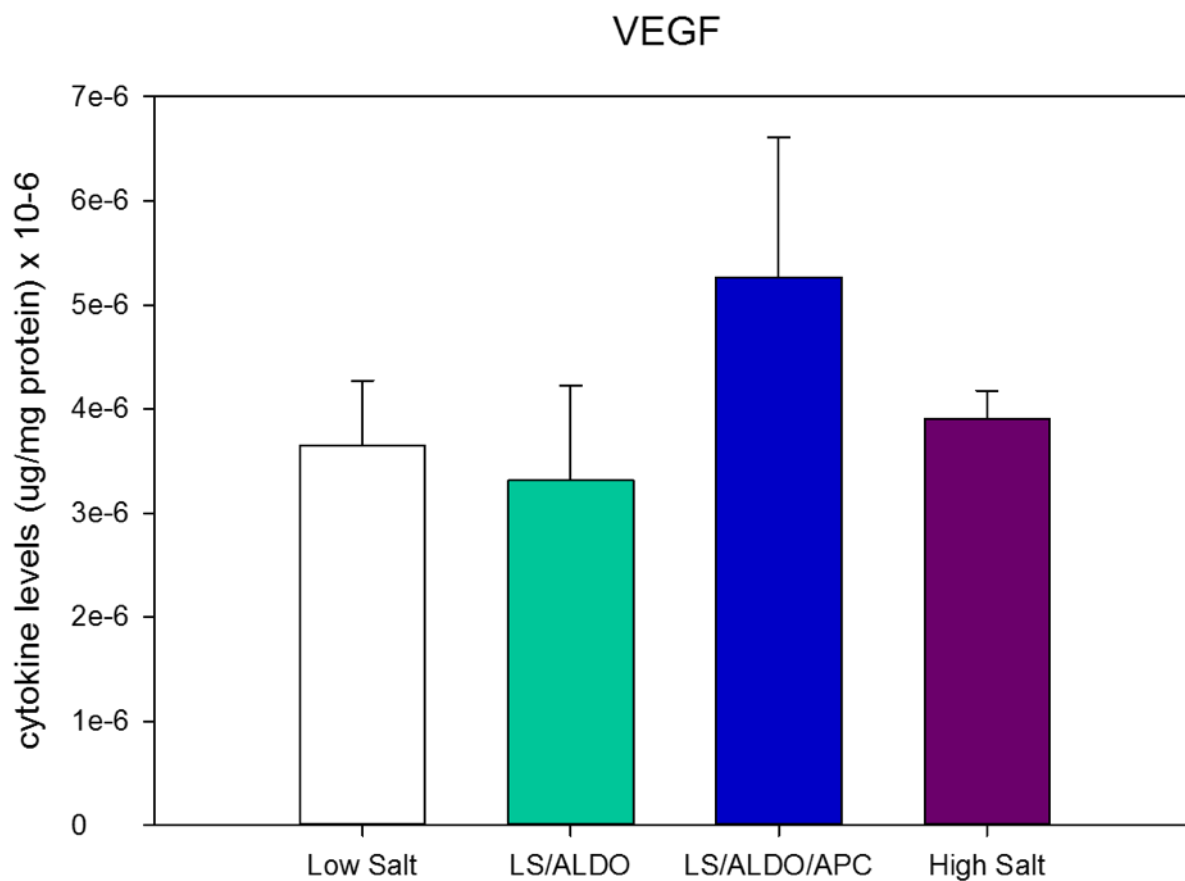


Figure 4d

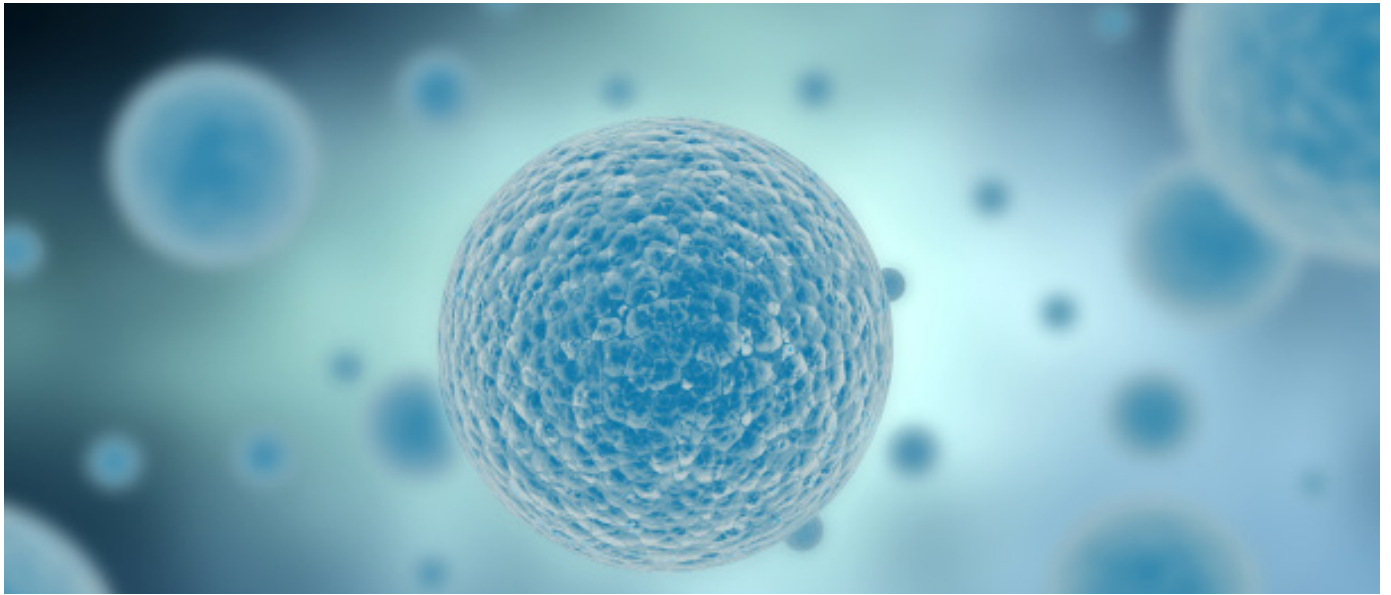
Figure 4abcd. ELISA results using VEGF, IL-6, MCP-1, and TNF-alpha. The aforementioned are cytokines that are involved in cell signaling in the immune pathway. These cytokines induce the PI3K/Akt signaling pathway.

## Discussion and Conclusion

Using the rat ApoL1 ELISA, ApoL1 protein was only detectable in the rats fed a low salt diet. This can be explained by the high sensitivity of African-Americans to low concentrations of salt. In the presence of high salt or aldosterone, ApoL1 expression was completely inhibited in the kidney. Aldosterone tended to inhibit ApoL1 expression, but this inhibition was partially blocked in the presence of apocynin. The expression of NOX4 (an NADPH oxidase subunit) was also higher in the rats fed a low salt diet. Apocynin increased the production of reactive oxygen species. ApoL-1, along with apocynin, have an effect on Akt-signaling. However, instead of reducing the amount of reactive oxygen species, apocynin appears to be inhibited in the presence of the ApoL-1 protein and upregulates the Akt pathway. Future tests will involve identifying receptors in the Akt pathway that are affected by apocynin, which could lead to conclusions about the effect of apocynin and oxidative stress on the kidney.

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# Outcomes of Endoscopic Therapy for Early Stage Esophageal Cancer

Monica McGee

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## Abstract

**Introduction:** Endoscopic mucosal resection (EMR) is a commonly used treatment for high grade dysplasia (HGD) and early stages of esophageal adenocarcinoma (EAC) in patients with Barrett's esophagus (BE). This study describes the experience of one institution with EMR and discusses outcomes after endoscopic therapy.

**Methods:** The patient database at Memorial Sloan Kettering Cancer Center (MSKCC) was searched for all patients who received endoscopic mucosal resection for Barrett's esophagus with high grade dysplasia or esophageal adenocarcinoma. A database was created, including demographic information, risk factors, and procedural outcomes, for all of these patients. The outcomes after endoscopic treatment were described.

**Results:** Complete response was achieved in 75% of patients who presented with high grade dysplasia or esophageal adenocarcinoma and 63% of patients who presented with Barrett's esophagus. The recurrence rate was 8.3% for patients with high grade dysplasia or esophageal adenocarcinoma and 3.7% for patients with Barrett's esophagus.

**Discussion:** This study suggests that endoscopic mucosal resection is an overall effective treatment for high grade dysplasia and esophageal adenocarcinoma. Risk factors, including cigarette smoking and high BMI, may play a role in increasing the incidence of recurrence. Further investigation of these factors in a more generalized study can yield important information for the promotion of long-term success rates of patients who receive endoscopic therapy for esophageal abnormalities.

## Introduction

Specialized intestinal metaplasia, or Barrett's esophagus, is a condition in which normal squamous cells change into columnar cells. This condition can be seen in patients who have acid reflux or gastroesophageal reflux disease (GERD), a chronic digestive disorder that results from a weakened lower esophageal sphincter (Ganz et al. 2008). Though Barrett's esophagus is not harmful, if cells continue to undergo developmental changes, dysplasia, a condition of abnormal cell division, can occur. As cells become more and more abnormal, dysplasia can progress from low-grade to high-grade, and if not treated, eventually develop into carcinoma.

High-grade dysplasia or early stage esophageal adenocarcinoma within the innermost esophageal layers can be treated by endoscopic mucosal resection in which the affected portion of esophagus is removed with the help of an endoscope, or radiofrequency ablation (RFA), in which heat generated by an electrical current is used to burn the abnormalities present (Shah 2015). Later cancer stages may be treated with a combination of alternate modalities, including chemotherapy, radiation therapy, and/or surgical therapy. Surgical therapy often includes esophagectomy, in which the affected segment of the esophagus is surgically removed and the upper

section of the esophagus is attached to the stomach.

Prior studies have suggested that GERD, obesity, diabetes, smoking, hypertension, and history of other cancers may be possible risk factors for Barrett's esophagus with high grade dysplasia or esophageal adenocarcinoma, and patient outcomes after endoscopic treatment of these conditions (Pech et al. 2008). This study aims to describe the procedural outcomes of patients who underwent EMR for Barrett's esophagus with dysplasia, or esophageal carcinoma, at one institution, and determine the factors that affected these outcomes.

## Methods

This is a retrospective descriptive study evaluating patients treated at a single cancer center with endoscopic mucosal resection for high grade dysplasia or early stage esophageal adenocarcinoma. This study was approved by the institutional review board (IRB) at Memorial Sloan Kettering Cancer Center (MSKCC).

### Participants

The MSKCC patient database was searched to identify all patients who received esophagogastroduodenoscopy (EGD) with EMR or who had a pathology

report specifying endoscopic mucosal resection performed by Dr. Hans Gerdes or Dr. Pari Shah. All cases were reviewed and patients were included into the study if they underwent esophageal EMR between June 2012 and June 2016.

**Endoscopic Therapy/Follow-Up**

Patients who presented to MSKCC with suspected esophageal adenocarcinoma or Barrett’s esophagus with dysplasia underwent EGD. Patients often underwent endoscopic ultrasound (EUS) for additional staging. Pathology and EUS results were used to determine degree of differentiation and stage of disease. Stages of EAC included carcinoma in situ or HGD (T0), invasive tumor confined to the mucosal or muscularis mucosa layer of the esophagus (T1a), and tumor invading into the submucosal layer (T1b). Patients determined to have nodular dysplasia or early stage EAC were treated with EMR. EMR was performed by a qualified gastroenterologist using the band suction technique (Zheng et al. 2016). In this technique, the abnormal area is suctioned into a cap placed on the tip of the

endoscope, a rubber band is fired to encompass the area of abnormality, and a snare with electrocautery is used to resect the specimen at the base of the band. EMR was repeated until all raised areas were resected. All specimens were collected and submitted to pathology. In cases with additional flat abnormalities, radiofrequency ablation was used for subsequent treatment. EGD for follow-up examination, including biopsies, was completed every 3 months thereafter for the first year. Patients were assessed for complete response of dysplasia and for complete response of BE. Patients found to have recurrent disease were retreated endoscopically with EMR or RFA to the recurrent areas. Patients with esophageal cancer invading the submucosal layer were referred for treatment through other modalities, such as with esophagectomy or chemotherapy, following staging.

**Database**

Patient records were reviewed and a database was created including patient data, such as demographic information. Possible risk factors, such

Number of patients	36
Male/Female	31 (86.1%) / 5 (13.9%)
Mean age (years)	70 Range (47-86) years
Mean BMI	29.0 Range (18.4-38.5)
Previous EMR	6/36 (16.7%)
Possible Risk Factors	
GERD	12/36 (33.3%)
Smoking	24/36 (66.7%) former 3/36 (8.3%) current 9/36 (25%) never smoker
Hypertension	24/36 (66.7%)
Diabetes Mellitus	10/36 (27.8%)
History of Other Cancer	12/36 (33.3%)

Table 1. Patient Information



Table 2. Procedure Information and Outcomes

Characteristic	Number of patients (n=36)
Highest grade of dysplasia	
Low-grade	1/36 (2.8%)
High-grade	5/36 (13.9%)
Carcinoma	30/36 (83.3%)
Carcinoma EUS stage	27/36
uT0	4/27 (63.0%)
uT1a	20/27 (25.9%)
uT1b	3/27 (11.1%)
No EUS	9/36 (25%)
Carcinoma pathology stage after EMR	36
pT0	7/36(19.4%)
pT1a	19/36 (52.8%)
pT1b	10/36 (27.8%)
EUS and pathology match	21/27 (77.8%)
EUS higher than pathology	2/27 (7.4%)
Pathology higher than EUS	4/27 (14.8%)
EUS lymph node involvement	2/27 (7.4%)
Complete response of dysplasia/carcinoma	27/36 (75.0%)
Complete response of BE	17/27 (63.0%)
Recurrence of dysplasia/carcinoma	3/36 (8.3%)
Recurrence of BE	1/27 (3.7%)
Subsequent procedures/surgeries	
RFA	7/36 (19.4%)

ultrasound. Nine (25%) patients did not undergo ultrasound. Pathology staging after endoscopic mucosal resection was reviewed. Pathology reports indicated that there were seven (19.4%) patients with carcinoma in stage T0, nineteen (52.7%) patients in stage T1a, and ten (27.8%) patients in stage T1b. A comparison between the twenty-seven endoscopic ultrasounds and their respective post-endoscopic mucosal resection pathology reports revealed two (7.4%) cases of ultrasound overstaging and four (14.8%) cases of ultrasound understaging, as shown in table 4. The pathology and endoscopic ultrasound reports matched in twenty-one (77.8%)

of the patients. Endoscopic ultrasound indicated lymph node involvement in two (7.4%) patients. Of all thirty-six patients with dysplasia or carcinoma, twenty seven (75%) patients achieved a complete response and three (11.1%) patients had a recurrence. Of the twenty-seven patients who presented to MSKCC with Barrett’s esophagus, seventeen (63%) patients had a complete response and one (5.9%) patient had a recurrence of Barrett’s esophagus. Seven (19.4%) patients required subsequent radiofrequency ablation and four (11.1%) patients required esophagectomy after not having a complete response from endoscopic mucosal resection. Table 2 summarizes all of the procedure details and outcomes that were noted during this study.

## Discussion

The results of this study suggest that EMR can be effectively used to treat Barrett’s esophagus with high grade dysplasia and early stage esophageal carcinoma. There was an overall good response for patients with HGD and EAC, and a fair response for patients with BE, concluded from the high complete response rates and low recurrence rates of the respective conditions. Previous studies have shown a long-term eradication rate of 94.5% for patients treated with esophageal EMR (Pech et al. 2008). The slightly lower results of our study may be due to many different factors, such as undetected lesions or heightened predisposition to adenocarcinoma.

## Body Mass Index

The one patient who had a recurrence of BE also had a BMI of 36.6. By comparison, the rest of the patients that were reviewed had a much lower mean BMI of 29.0. Additionally, the average BMI of the thirty patients who presented with carcinoma was 29.5, the average BMI of the five patients presenting with HGD was 25.4, and the average BMI of the twenty-seven patients presenting with BE was 29.7. This data supports previous studies that have shown a high prevalence in obesity amongst patients with BE and HGD or EAC (Rubenstein 2014).

Patient	Dysplasia	EUS	Pathology	
1	EAC	T1a	T1a	1
2	EAC	T1a	T1a	1
3	HGD	T0	T0	1
4	EAC	T1a	T1b	0
5	EAC	T1a	T1a	1
6	EAC	T1a	T1a	1
7	EAC	T1b	T1a	2
8	EAC	T1a	T1a	1
9	EAC	T1a	T1b	0
10	HGD	T0	T0	1
11	EAC	T1a	T1a	1
12	LGD	T0	T0	1
13	EAC	T1a	T1a	1
14	EAC	T1a	T0	2
15	EAC	T1a	T1b	0
16	EAC	T1b	T1b	1
17	EAC	T1a	T1a	1
18	EAC	T1a	T1a	1
19	HGD	T0	T0	1
20	EAC	T1a	T1a	1
21	EAC	T1a	T1a	1
22	EAC	T1b	T1b	1
23	EAC	T1a	T1a	1
24	EAC	T1a	T1a	1
25	EAC	T1a	T1a	1
26	EAC	T1a	T1b	0
27	EAC	T1a	T1a	1

Table 3. Patient Comparisons

Key

0= EUS understaged  
 1= EUS and pathology matched staging  
 2= EUS overstaged

## Cigarette Smoking

Two (66.7%) of the three patients who had a recurrence of HGD or EAC were former pack a day cigarette smokers, which supports prior evidence that smoking may serve as a risk factor for BE with HGD or EAC. The percentage of patients who had a recurrence was relatively consistent with the overall percentage of smokers in the total reviewed patient population, which was reported to be 75% former or current smokers. Of the thirty patients who presented with EAC, twenty (66.7%) were former or current smokers at the time of their procedure. All five (100%) of the patients who presented with HGD were former or current smokers. Twenty (74.1%) of the twenty-seven patients who presented with BE were current or former smokers. These findings further suggest that smoking may play a role in the procedural outcomes of patients who receive EMR. These findings also support prior evidence that smoking is prevalent in patients with Barrett's, HGD, and/or EAC (Sun et al 2016). Twenty-two (73.3%) of the thirty patients with EAC also had histories of hypertension, supporting studies that have shown a possible link between hypertension and cancer (Radisauskas et al. 2016).

## Other Risk Factors

Diabetes mellitus, and history of other cancer or GERD, were not determined to be major risk factors for BE with HGD or adenocarcinoma based on this study. Unlike other studies, there was a relatively low prevalence of these factors in the patients that were treated and recurred. However, this may be due to under-reporting or under-documentation of these risk factors, which represents an inherent limitation of retrospective studies.

Another interesting finding was that, based on the EUS and pathology reports, most reported cancers were at stage T1a or earlier, which could be cured endoscopically.

This is not the first study describing the outcomes of patients treated with EMR for EAC or BE with HGD. However, this study was unique because the data was analyzed for a sample of patients at a cancer center. A possible limitation of this may be that selection bias prevents the results from being representative of the general population. The relatively small sample size of patients reviewed in this study prevents the results from having statistical significance. Apparent correlations and percentages may be due to chance, rather than a significant correlation because of the small population being reviewed. The outcomes of EMR in a more


general patient population would be interesting to further investigate. Further research on the correlation between high BMI and smoking on recurrence of esophageal abnormalities after EMR may also be interesting to explore.

Overall, this study indicates that for the population of patients who received EMR at MSKCC, endoscopic therapy was an effective treatment for EAC and BE with HGD. Analysis of the patient records pre- and post-EMR support the findings of previous studies, which suggest cigarette smoking and high BMI to be risk factors for early EAC development and recurrence. Further analysis of these factors may provide important information to promote complete response and improvement in patients with esophageal abnormalities.

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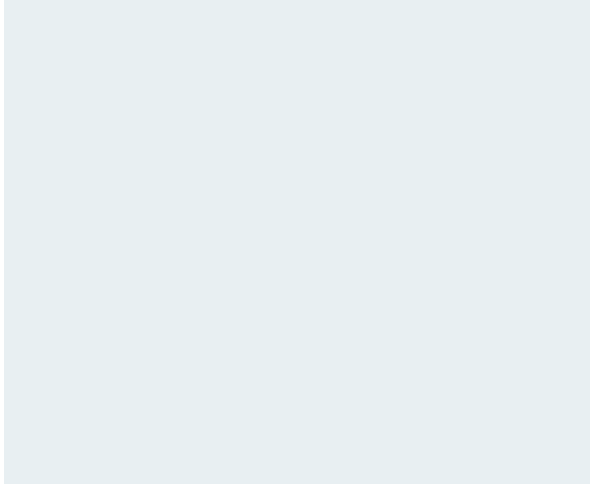
# FEATURES



“ The writer cannot expect to be excused from the task of reeducation and regeneration that must be done. In fact, (s)he should march right in front.



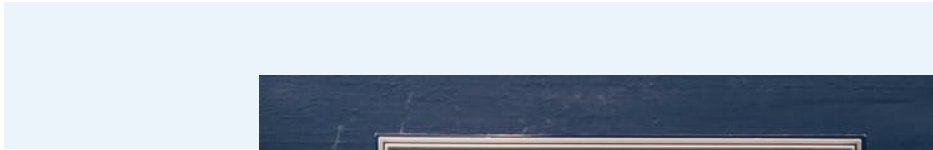




# PRESS P

SPELMAN STUD  
VIDEO ADS AN  
MAKING PROC

By: Chelsea Bonner



# LAY

## STUDENTS' ATTITUDES TOWARDS AND THEIR MEANING- NESSES

Since its introduction into the world in the mid-19th century, advertising has come to be considered a major institution within capitalist economies in society. The first recognizable signs of advertising appeared in magazines and newspapers and now manifests in new technologies such as radio, television, the Internet, and smartphones. Neil Postman estimates that the average American will have seen well over one million commercials by the age of forty and will have “close to another million to go before his first social security check” (Frith 1997: 1). Individuals in society are embedded in a culture of consumption, one in which advertising has increasingly defined our collective consciousness (Frith 1997). Advertising has been considered by many who experience it as the simple conveying of information about goods and services, however, it is much more than that. Advertisements – through their constant repetition of images that become subconsciously ingrained in our minds – reinforce particular social attitudes, display idealized figures to be emulated, and communicate cultural values (Bogart 1988: 76).

With the development of new media such as social networking sites and online streaming platforms, the role that advertising currently plays in these spaces is worthy of a critical analysis. YouTube, for example, serves as a relevant point of analysis. Created in 2005, YouTube is a video-sharing website that allows billions of people to

“discover, watch and share originally-created videos” and serves as a distribution platform for content creators and advertisers (Google 2016). Shortly after its creation, YouTube became an independent subsidiary of Google through the company’s efforts to integrate search engines with content, social networking, and advertising (van Dijck 2009: 42). In January 2007, YouTube’s CEO announced that the website would begin to incorporate short commercial clips, commonly known as video ads, produced by advertisers. A video ad appears before other videos on YouTube, beside playing videos, and in search results (Google 2016). This served as the first sign towards the accommodation of advertisers and the commercialization of a small start-up site that was previously driven by users and content creators. With the addition of video ads, YouTube has transformed into a commercial platform that now works as a significant component of the evolving network of media businesses that are dominated by Google (van Dijck 2009: 48).

Previous research on advertising has explored media such as print, newspapers, magazines, radio, television, and most recently, Internet. However, little (if any) research has used video ads as a point of discussion or investigation. Video ads can be thought of as having similar characteristics to television advertisements and commercials. Commercials come in a range of styles and formats – some tell a story or offer brief bits of imagery while others make a demonstration or offer a testimonial. But almost all of them rely on the protagonists to make the point, and the protagonist serves as a stand-in for the consumer

(Bogart 1988: 77).

With the emergence of technology like smartphones and video-sharing sites like YouTube where the user has a more control over the content that they view, advertisers and media companies alike are adjusting their strategies to reach consumers. Henry Jenkins (2006) notes that this shift in the way that media content is produced and circulated results in a participatory culture in which ordinary citizens are able to wield media technologies, technologies that were once controlled by what van Dijck (2009) calls “capitalist-intensive industries” (van Dijck 2009: 42). With this, there are important power agendas that arise in advertising, as noted by Firth (1997). Jenkins (2006) argues that new media offers users and consumers leverage to negotiate their relationships with media companies. Previde (1999) similarly claims that individuals’ ability to self-select which advertising messages to view shifts the power from the advertiser to the consumer (Previte 1999: 207). Van Dijck (2009) contends, though, that with the increasing commercialization of the Internet (such as the introduction of video ads on YouTube), the pre-existing power structure and relationship between media companies, advertisers, and users has been restored, and that users and consumers have a very limited potential to take back that power from advertisers (van Dijck 2009: 42). We see evidence of this by the fact that companies are now able to track online social behavior and activities, making the relationship between advertisers and consumers more intimate than ever (van Dijck 2009: 47). With the increasing commercialization of the Internet, a concern of many is that advertising will drown out public speech and limit the social benefits of much needed public forums, such as user-generated platforms like YouTube (Previte 1999: 199). As a part of my examination of Spelman students’ attitudes towards video advertising, I was interested in further exploring this notion of power in Internet commercialization by seeing how students perceive the power dynamics involved in video advertising. Specifically, who do students think holds the power in this new media landscape?

Bogart (1988) notes that the media context in which advertising appears influences how messages are perceived by individuals (Bogart 1988: 76). In measuring attitudes towards advertising in a particular medium, it is important to distinguish between advertising as an instrument and advertising as an institution, as well as between

personalized and generalized attitudes. With this in mind, Pollay and Mittal (1993) developed a comprehensive model to measure these attitudes that includes micro-level beliefs about advertising and macro-level societal beliefs about advertising. The dimensions of the model consist of three personal utility factors – product information, social image information and hedonic amusements – and four socio-economic factors – good for the economy, fostering materialism, corrupting values and falsity/nonsense (Pollay and Mittal 1993: 104). Previous studies have found that consumers’ attitudes toward individual advertisements are influenced by their attitudes toward advertising in general. In particular, people who have more favorable feelings about advertising in general have found specific advertisements more acceptable, informative, and enjoyable. Furthermore, the more alienated consumers felt, the more they criticized advertising (Bush, Smith and Martin 1999: 15).

The vast majority of research on attitudes towards advertising has focused on print, radio, and television advertising. Previde (1999) is one of the few researchers who has investigated attitudes towards advertising in new media. Her research examined “how consumers perceive the practice of traditional commercial techniques in electronic media” (Previte 1999: 199). Given the commercial free start of the Internet, Previde theorized that Internet users would have negative attitudes towards the institution of advertising. In surveying 256 electronic and student volunteers, she found relationships between Internet users’ attitudes towards advertising and their online experience, as well as a strong negative attitude toward advertising in general and the societal effects of advertising. Additionally, she concluded that general attitudes to the institution of

Companies are now able to track online social behavior and activities, making the relationship between advertisers and consumers more intimate than ever...

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concluded that general attitudes to the institution of advertising were mostly negative, from both a societal and economic perspective (Previte 1999: 204).

Despite its immense potential, research on attitudes towards advertising has largely centered on Whites (Bush et al 1999: 13). Previous research in Black Studies specifically on African-Americans' attitudes towards advertising have indicated that African-Americans tended to be more receptive to advertising in general than Caucasians, that African-Americans were more satisfied with the informational value of advertising, and that they were somewhat more materialistic than Caucasians (Bauer and Greyser 1968; Duran, Teel, and Bearden 1979; Tolley and Goett 1971; Soley and Reid 1983; Yoon 1995). Bush et al (1999) also contributed to this research in this area through their comparison of African-Americans and Caucasians in the influence of consumer socialization variables on attitudes toward advertising. Given that college-educated African-Americans watched five more hours of television a week than Caucasians, Bush et al (1999) posited that the media's socializing effects would be greater for African-Americans than for their Caucasian counterparts. Using the theory of consumer socialization, the authors explored factors that might shape a consumer skill – attitudes toward advertising – for African-American and Caucasian young adults. Consumer socialization is the process by which young people develop consumer related skills, knowledge, and attitudes. According to this theory, young adults learn the rational aspects of consumption from their parents, the mass media teaches them to give social meaning to products, schools teach the importance of economic wisdom, and peers exercise varying social pressures. The theory is based on the cognitive development model and the social learning model (Bandura 1963). Similar to Previte (1999), Bush et al (1999) utilized Pollay and Mittal's attitudes towards advertising scale as a model for measuring African-American and Caucasians' attitudes. They found that socialization agents like parents, peers, mass

media, race, and gender play a major role in shaping individuals' general attitudes toward advertising. Specifically, African-Americans had more positive attitudes towards advertising than Caucasians, and women had more positive attitudes towards advertising than men. Ultimately, the African-American middle class found advertising to be an ally in product purchase (Bush et al 1999: 21).

Recently, some companies have devoted attention to understanding Black female consumers. The market research company Nielsen has called the African-American woman a "trendsetter, a social maven, the head of her household, a leader in business and community" and noted that she is "progressive with her thoughts on...entertainment and diversity in advertising" (Nielsen Reports 2014). Similarly, Feick and Price (1987) indicated that female African-Americans were more likely to be "market mavens,"

defined as "individuals who have information about many kinds of products, places to shop, and other facets of markets, and initiate discussions with consumers and respond to requests from consumers for market

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## For black women, seeing black women with natural hair in advertisements, also solidifies the social acceptability of natural black hair.

information" (Feick and Price 1987: 85). Given that Blacks are some of the most active video consumers online (76 percent of them said that they used video-sharing sites, and that they spend two and a half hours watching videos on their smartphones on a monthly basis) in comparison to Whites, investigating their attitudes towards video ads is worthy of research (The Washington Post 2011) (Nielsen 2015). Additionally, little empirical research has been devoted specifically to exploring young Black women's attitudes towards advertising.

### Meaning Matters: Deconstructing Meaning in Advertisements

Advertisements are much more than messages aimed at relaying information about goods and services so that consumers can make brand choices. In addition to offering product information, advertisements serve as social and cultural texts about ourselves and are embedded with the cultural roles and values that define our everyday lives (Frith 1997: 1). Furthermore, William O'Barr (1994) asserts that all advertisements contain ideology. Ideology is defined as "ideas that buttress and

support a particular distribution of power in society" (Frith 1997: 9). With this, advertising manipulates symbols in order to create meaning for viewers, and the values that are conveyed in advertising mirror the dominant ideological themes within society (Frith 1997: 13). Consequently, these messages have broader social and cultural implications. In reading advertisements, we can even see how "the political, social, and cultural forms of subordination that create inequities among different groups as they live out their lives" manifest (Frith 1997: 2). In this way, advertising simultaneously creates culture and reflects society.

In "Undressing the Ad: Reading Culture in Advertising," Frith (1997) offers a guide for analyzing meaning within advertisements. The first step involved looking at the surface meaning, or the overall impression that a reader might receive from briefly viewing the advertisement. Second is looking at the advertisers' intended meaning, or the sales message that they are trying to relay about the products, services, or even lifestyles represented in the ad. Lastly, the viewer may put forth theories about the cultural or ideological meaning of the ad, making sense of it by relating it to their culture and the shared belief systems present in society. This largely relies on their cultural knowledge and background (Frith 1997: 5). A second way that ads can be analyzed is through looking at the social relationships that are depicted between the people who are featured in them. Explaining what props and symbols may represent as well as power structures (i.e. how power is expressed, who appears to have the power or control in the story, and how power is exerted over another) in an ad stands as another important point of analysis (Frith 1997: 9). In analyzing the meaning behind advertisements, we engage in what Cornel West (1990) calls a process of demystification. Demystification is to seek the connotative meaning embedded in such myths and to historicize them or expose them" (Frith 1997: 11). In this way, "a deconstruction and political reading of promotional propaganda involved in the economic dynamics of the late twentieth century" becomes necessary (Frith 1997).

### **Perceptions of Black Women in Advertising**

Due to the increasingly rapid growth of the African-American population in the United States, advertisers are dedicating more effort to reaching minority women as potentially profitable

consumers (Frith 1997: 86). Their purchasing power represents over 20% of the nation's total consumer spending, steadily rising at a faster rate than the non-minority population (Mastro & Stern 2003). Previous research has shown that African-Americans seem to spend more than the average U.S. citizen on products like jewelry, accessories, and personal care items. Additionally, they have been found to be more motivated than their White counterparts by quality and status. (Bush et al 1999: 15).

Because of the separation of the media, advertising targeting specific racial groups may look very different from one another (Bush et al 1999: 14). The ways in which African-American has been depicted in advertising has gone through many shifts and changes in years – historically, Blacks were repeatedly portrayed in subservient positions like porters, cooks, and maids. Advertisements today might show African-Americans in more dominant roles such as that of a business executive. Additionally, there has been an increase in beauty and cosmetic ads that target Black women (Frith 1997: 85). Recently, however, there has been an increase in the number of African-American models that are featured in advertisements. This increase has shown to be beneficial in some ways, as research on African-Americans has revealed that African Americans find commercials with models of the same race to be more meaningful than commercials with say, an all-White cast (Schlinger and Plummer 1972).

Because White men typically are the advertisers who control the images presented in the media, these images will often reflect their values and interests. As a result stereotypical images and expectations of Blacks are often perpetuated and reinforced, contributing to the dominant ideology of White supremacy. Once exposed to these texts and images, individuals within society begin to internalize these advertising messages and their attitudes towards Blacks become shaped and influenced by these dominant ideologies. In this way, many critics of advertising contend that it maintains a culture dominated by racism and White hegemony. Bristor et al (1995) notes that "the problem with stereotypical portrayals is not whether they are true or false but that they inhibit the production of other meanings or ideas" (Fuller 2001: 122). Given that media and advertising are oftentimes a primary source of socialization for many in society, these images have very powerful and long-lasting implications. Although the presence of Blacks in advertising is important, the ways in which they are portrayed in advertisements is equally, if not more, important. Using the social cognitive theory



(SCT) as a framework, Mastro and Stern (2003) evaluated depictions of Blacks and other racial groups in prime-time television commercials and identified the possible implications of exposure to these ads on minorities (Mastro and Stern 2003: 637). SCT posits that “under certain conditions, such as the repeated, simple, and rewarded messages that typify television ads, viewers can and do learn from what they see in the media.” Furthermore, it theorizes that “the manner in which images are presented on television influence how viewers interpret and respond to the modeled acts” (Bandura 2002). In looking at 2,880 commercials over a 3-week period, Mastro and Stern (2003) found that Blacks were most commonly depicted as older adults and located outdoors. Even more, Black women tended to be portrayed as average in affability while White and Asian women were portrayed as highly affable. Additional research on the representations of Blacks in advertising by Bowen and Schmid (1997) indicated that Black people were commonly characterized as athletes, musicians, and in family settings (Hazell and Clarke 2008: 8). Bristor et al (1995) similarly content analyzed television commercials, noting that most of them conveyed the message that Blacks are still “in their place” (Fuller 2001: 121).

There also exists a historic tendency to present Blacks as links to product characteristics or as objects rather than as consumers like their White counterparts (Bush et al 1999: 17). Black models’ roles in ads largely seem to be to entertain and serve (Fuller 2001: 123). Researchers have also explored persistent stereotypes of Black women that continue to plague advertising. The authoritative head of the household or single mother matriarch; the independent, headstrong, and overly expressive Sapphire; the seductive and sexually aggressive Jezebel; and the good-natured, loud, and often overweight Mammy (Hazell and Clarke 2008: 9). Through her two-pronged qualitative investigation of African-American male and female students, Fuller (2001) found that students perceived the popular Pine-Sol commercial as an attempt to revive the enduring Aunt Jemima or mammy caricature. With this, she argues that the mammy concept has been deeply ingrained into American culture and society that it continuously appears in ads that feature Black women (Fuller 2001: 123). Through this research, we see how gender and race interact in how individuals are

portrayed in the advertising (Hazell and Clarke 2008: 9).

Considering that much of the previous research on Blacks’ attitudes towards advertising and representations of Blacks has been conducted a decade or longer ago, a more contemporary analysis on this topic is needed. More importantly, examining the ways in which Spelman students as these so-called “market mavens” make meaning out of video ads that feature or target them is worthwhile.

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# Pompa: Black Consciousness, Politics, Youth, & Identity in Brazil

Sarah Brokenborough

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## Understanding Black Consciousness and Politics in Brazil

Literature on the Afro-Brazilian's political participation within Brazil's presidential elections and their political influence is becoming more prominent due to the nation's changing racial demographics and by the fact that the marginalized sectors of Brazilian society are becoming more politically aware and are mobilizing to create social change.

This year, conversations regarding Afro-Brazilians and politics centered on Marina Silva and her hopes to win the 2014 presidential election and defeat the incumbent, Dilma Souseff. Silva was one of the top three candidates for president, but she did not make it to the second round. Unlike the continuous connections drawn between Silva and black political consciousness, I aim to present a more diverse understanding of the political nature of Afro-Brazilians and how past sentiments and events within the Afro-Brazilian community can alter how one sees the political power of African-Brazilians.

I have created the following literature review in hopes of highlighting relevant aspects of the multilayered and complex relationship of politics and Afro-Brazilians in order to help guide readers understand the under researched and conflicting information on Black consciousness, politics, and identity in Brazil presented thusfar by academia.

### **Afro-Brazilian Religion, Politics, and Identity**

Selka (2005) examines the relationship between the Afro-Brazilian identity and the different religions present in Bahia. The evangelical Christians have strongly opposed practices that suggest Candomblé's status as a symbol of the black identity in Brazil. Yet for many Bahians, "the black consciousness movement, [and] activism goes hand in hand with affirming one's ethnic identity through the practice or at least the valorization of Candomblé" (Selka 2005, page 72). Evangelical Christians, Catholics, and Candomblé organizations all have "radically different meanings to traditional Afro-Brazilian symbols and practices, and Bahian communities of African descent are divided along religious lines on questions of Afro-Brazilian identity" (Selka 2005, page 73). Today, Candomblé is seen as the natural connection between African-derived religion and blackness. Candomblé terreiros have ties to the black

consciousness movement that emerged in Salvador during the 1970s and 1980s and "although there is no official link between black political organizations such as the Movimento Negro Unificado (United Black Movement-MNU) and any particular religion, many political activists concerned with antiracism are connected with the Candomblé community" (Selka 2005, page 74). Black activists and academics have argued from within and outside of the black consciousness movement that the focus on African-derived traditions as the basis for black solidarity can be seen as problematic since it alienates potential constituents of the movements since many Afro-Brazilians don't identify with Candomblé. With Candomblé as an ethnic emblem, Black activists have sought to promote the cultural history and celebration of Candomblé. Yet many evangelicals see African descent rather than shared cultural traditions as the basis for black solidarity.

Selka (2005) goes on to explain how Baptists, Evangelicals, Protestants, and Catholics engage the political sphere of Bahia. No religious congregation is politically homogeneous, for example there are groups of Pentecostals engaged in progressive politics and proclaiming that Jesus was a leftist as well as Pentecostals that believe they should simply vote for who their pastor's candidate. Selka (2009) also interviews evangelicals who self-identify as Afro-Brazilian, do not claim Candomblé as their religion, and explain that their shared experience of racism creates a common racial identity more than a specific cultural or religious tradition.

Selka (2009) examines the overlap of the religious and political realm within the city of Cachoeira, Bahia, Brazil with an historical analysis of the Afro-Catholic Sisterhood of Our Lady of Good Death (Boa Morte) within the city. Cachoeira is known for its deeply rooted Afro-Brazilian traditions and culture like its modern neighbor of 110 kilometers away, Salvador. The sisters of Boa Morte have created an answer to the difficulty for rural Afro-Brazilians to mobilize on the basis of gender or racial identity. "[...] organizations such as the Sisterhood of Boa Morte provide a model of ethnic pride and resistance expressed not in the militant language of the university-trained activist from the city but in the more familiar idioms of traditional rural life" (Selka 2009, Page 34). Boa Morte instead use their image of being a source of historic Afro-Brazilian tradition, religion, and culture to assert influence and dignity more than promote political or social change due to the politics of patronage. "[...] The arenas of Afro-Brazilian religion and public politics

and grassroots activists have drawn upon the image of Boa Morte, presumably to increase their popular appeal.

This author has presented a claim that there are ethnoreligious identities in Bahia, and I ask whether these identities heavily responsible for sociopolitical consciousness in Salvador. This author has also presented two works that describe the Afro-Brazilian religious sector of Bahia overlaps with the Afro-Brazilian political sector of Bahia. This project will see if religion is a self-defining factor among the participants.

### **Afro-Brazilian and Party Identification**

Boas and Smith (2014) explore how demographic similarities between legislators and the public provides a stronger basis for the substantive representation policy preferences than party representation. "Brazilians routinely vote based on candidates' personal qualities rather than party or ideology, and in the open-list system they are given ample opportunity to choose a candidate of the same race, class, gender, or religion" (Boas & Smith 2014, page 1). Boas and Smith (2014) explain that for many Brazilians, choosing a candidate that looks like them may be the best way to elect someone who thinks similarly about major policy issues. In regards to the Afro-Brazilians, this would mean that Marina Silva would have had a large amount of voters identifying with her based on demographic similarities. Yet she did not make it to the 2nd round, and lost the elections despite having 22 million people vote for her, she consequently endorsed Aécio Neves for presidency.

Boas and Smith say that only 40% of Brazil identifies with a party and party discipline in Congress is low, which leaves political parties with a very small role in the process of gaining electoral votes for candidates. "A Black legislator who attributes her victory to the Black vote is more likely to hew to the preferences of Afro-Brazilians than one who considers race irrelevant to her electoral fortunes" (Boas and Smith, page 7-8). There is evidence that class generates stronger identity voting effects than gender or race, meaning many Brazilians are more likely to vote for a candidate of their same social class than of their same race or gender.

Yet race in Brazil is said to be a weak basis for political identity, due to the fluidity of race and complex nature of race within Brazil's historical context. Boas and Smith (2014) points out that Afro-Brazilian voters and legislators are unlikely to have similar opinions across a range of issues on

the basis of race. This project presents a conflicting view where Afro-Brazilian participants see the need to vote for Afro-Brazilian legislators.

### **Afro-Brazilian: Racial Identification and Brazilian Youth**

Lima (2009) explores how informal schooling, cultural centers, and formal schooling, the public school system, shape the Afro-Brazilian identity within Salvador's low-income youth. Salvador's cultural centers aim to affirm students' racial identity as a means of promoting success. While racial identity is fluid literature shows that there exists a common Afro-Brazilian identity despite the myth of Brazil's racial democracy renders all Afro-descendants invisible. Lima (2009) research showcases how students' identities are fluid and that the Black youth of Brazil are aware of or have experienced social marginalization and inequality, and have a distinctive perspective on higher education, the future job market, and what it means to be Black. Lima (2009) comes to the conclusion that there is no common Afro-Brazilian identity, because each student she interviewed had constructed a unique racial and cultural identity separate from the others. The study creates the space to question how Brazil's youth of African descent use their unique racial identities and perspectives to look at the Brazil's political process and this year's elections.

POMPA can be interpreted as a source of informal schooling through, what can be seen as the cultural center, of the Institute of Steve Biko. Each of the participants have a clear identity and self-identify as Afro-Brazilian. As Lima examined the cultural centers' effects on its participants, I intend to do the same with POMPA.

### **History of Afro-Brazilian Political Liberalization and Black Consciousness**

Kennedy (1986) explains the historical nature of Afro-Brazilians, primarily in the coastal cities such as São Paulo, Rio de Janeiro, and Salvador, developed a black consciousness following the 'opening to democracy' after the military dictatorships during the 20th century. Afro-Brazilians went against the 'etiquette' of discussing race relations, which was to accept without question that Brazil was a racial democracy. The military governments suppressed discussions of race, viewing critics of the racial democracy ideology as threats to national security. Black youths were involved at the time in a black-soul movement, Afro-Brazilians' identification with African-descendants from the US's culture, style, dance, and hairstyles, and the blackitude-baina, Afro-Brazilians' identification with African-inspired attire, Jamaican reggae, and dreadlocks (Kennedy 1986, page 204-205). Both



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contributed to the Black youths development of a racial identity but could not truly channel this racial consciousness to significant political action, which were instead mobilized through cultural organizations who would eventually publish papers, written by young Black students, with some of the main topics being police brutality, racism, and social inequalities.

Today, there is still a marked preference for books published by foreign authors. With a new generation of Black youth and Black students who have already gained a socio-political consciousness, there is a new need to disseminate more current information about the inequalities and racism within Brazil. Transmitting information through small newspapers, such as the Sociedade de Inter-cambio Brasil-Africa (SINB), Federaçao das

recruit for candidacy, and 2) the inability of the Afro-Brazilian movement and Afro-Brazilian politicians to mobilize a constituency around “blackness” due to a denial of the existence of racial discrimination, class differences, and a weak racial consciousness. But the black ethnicity is becoming a more prominent factor in Brazilian politics. I will see if the participants agree with the factors that inhibit a Black candidate from getting elected that Bailey outlined.

#### **Affirmative Action and State Policy Regarding Race**

Htun (2004) analyzes the emergence of affirmative action in 2001 after decades of state defending the myth of racial democracy. “The government admitted that Brazil is racist and endorsed an extreme form of affirmative action—quotas—to address racial inequality” (Htun 2004, page 61). These quotas challenged how the country’s understanding and por-

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## Race in Brazil is said to be a weak basis for political identity, due to the fluidity of race and complex nature of race within Brazil’s historical context.

Entidades Afro-Brasileiras do Estado de Sao Paulo (FEABESP), or the Movimento Unificado (MNU) used to, but is no longer the most efficient way. This project will look to see if the participants are able to link the Afro-Brazilian identity to a political consciousness related to their identity and channel this consciousness into action.

#### **Public Opinion and Nonwhite Underrepresentation**

Bailey (2009) explains how the public of Brazil engages nonwhite underrepresentation in Brazilian politics. In most of the evaluations of this underrepresentation up to Bailey’s study, the public opinion of the Brazilian public were largely ignored. Although the opinion of the masses does not provide a definitive answer to the question of why underrepresentation occurs, it does contribute to the understanding of the intersection of race and politics. The study uses data collected from a 2000 probability survey of racial attitudes in the state of Rio de Janeiro showing that the difficulty of electing a nonwhite person boils down to 2 reasons: 1) the difficulty of a nonwhite person has becoming a viable candidate due to lack of financial support, negative stereotyping, lack of political experience, and lack of educated individuals to

trayal of itself to the international community. Htun goes on to explain that state was largely unwilling to define the “races” of Brazil and as a result there was a lack of a defined racial discrimination. Htun claims that Afro-Brazilians have failed to create a civil rights movement on the scale of the US or South African due to this lack of unified racial consciousness.

Htun fully explains the development and meaning of affirmative action in Brazil, how to opponents to quotas were labeled racists while claiming that quotas in itself were “reverse discrimination, insult blacks by presuming that they cannot compete on their own merits, and fail to address the causes of black exclusion, which are social, not racial” (Htun 2004, page 73). Quotas were viewed by critics as an US ethnocentric intrusion where quotas are impossible to implement, because of the difficulty to identify who is “black” in Brazil and that these quotas reflect a policy based on US race relations. Proponents say it’s clear to identify who is “black” based off of the Instituto Brasileiro de Geografia e Estatística’s (IBGE) census results, and joked if that doesn’t work, you could you always ask the police, because they surely know.

Htun goes on to conclude that Brazil



abandoned its racial democracy ideology not because of material incentives, threats, or vote seeking. Instead “policymakers became convinced that combating inequalities was the right thing to do” (Htun 2004, page 75). The World Conference on Racism held in Durban in September, 2001 opened the door for many to discuss racial discrimination in Brazil and commit to change. Affirmative action has been considered a form of public policy that has had a large impact of the Black population of Brazil, this project will see how participants view this type of policy.

### Racial Representation and Brazilian Politics

Johnson (1999) presents the “first scholarly attempt to investigate the racial composition of the Brazilian Congress, to analyze black underrepresentation, and to examine the behavior of black members” (Johnson 1999, page 98). Johnson finds that despite the incredibly low amount of Black politicians in Congress, they have advocated for white politicians and the general public to address racism and racial inequality. Many at the time believed that Brazilians do not have a strong racial consciousness and do not behave racially in politically relevant ways: voting along racial lines or organizing influential racial organizations and movements.

Johnson writes at the time there were only a mere 3 black senators in the Federal State, with Marina Silva and Benedita da Silva being the two black women. At the time blacks were underrepresented according to the difference between the percentage of blacks in the general population and the percentage of blacks in Congress. Rio de Janeiro had sent more black politicians to Congress than any other state. Johnson explains that there isn’t a lack of black candidates for Congress, there are underfinanced and ineffective campaigns by black candidates. Active black leaders are members of the PT and PDT, which are small leftist political parties that have difficulty gaining majority support for their proposals. The motion to create a black caucus has been stalled due to ideological and partisan diversity along with the hesitation of some black representatives to accept their blackness.

The Black members of Congress so far proposed legislation to outlaw and severely penalize acts of racism and racial discrimination, introduce African and African Brazilian history into the public schools, to institute affirmative action programs, and to give reparations to descendants of

slaves, among other race-specific projects (Johnson 1998, page 112).

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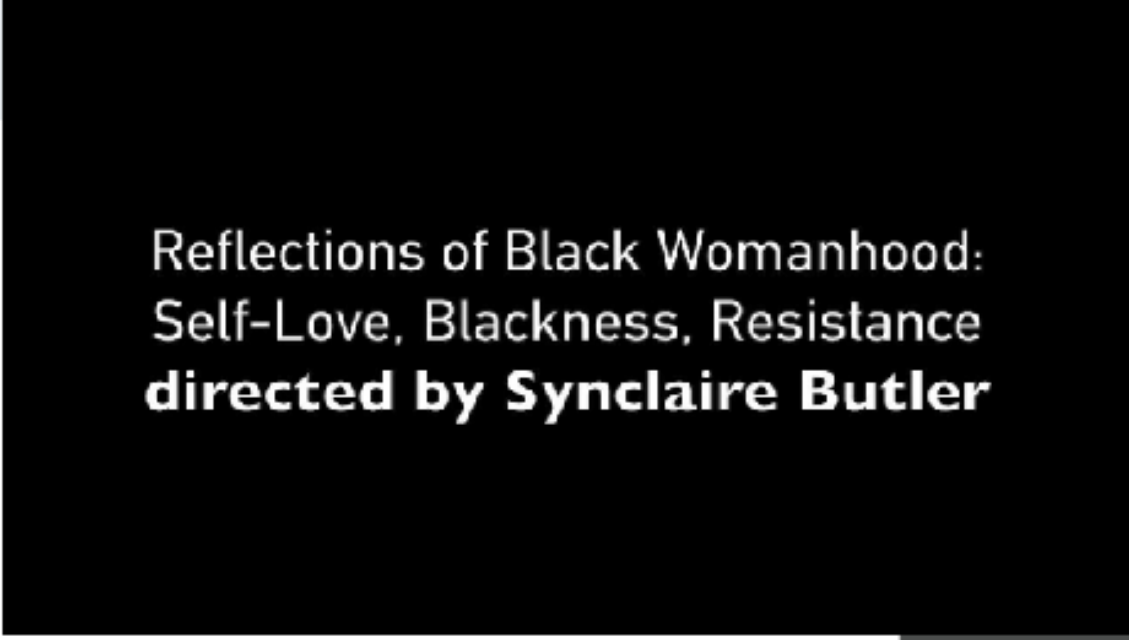
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# Self-Loving My Black Girl Magic... In a Dutch Context

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By: Synclaire Butler



Reflections of Black Womanhood:  
Self-Love, Blackness, Resistance  
**directed by Synclaire Butler**

This project is an analysis of the stories from politically self-identified black women and their experiences of resistance in the Netherlands. My research combines a written Independent Study Project (ISP) and a micro-documentary, which uncover the ways in which love has, and continues to play a role in resistance amongst black women in the Netherlands. Threading the themes of race, resistance, and love together, I created my main research question: How do black women in the Netherlands experience love as a form of resistance in a post-colonial society? The way in which race is constructed and understood is very unique in the Netherlands due to the claim of being a “color blind” society. In a place where race is not seen as an “issue,” conversations surrounding racism remain taboo.

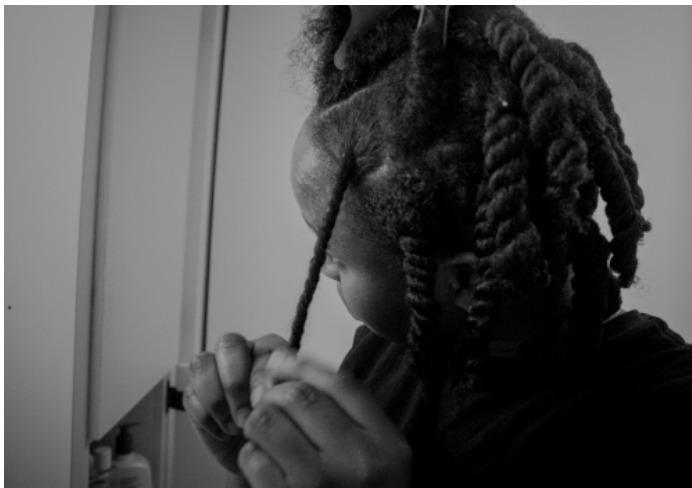
Through conducting oral history interviews with five self-identified black women, the research and mini-documentary reveal not only the prevalence of racism in Dutch culture, but most importantly the ways in which self-love and loving other women of color, proves to be influential in the ways these women navigate resistance. This study has led me to believe in the necessity for a love ethic within the anti-racism struggle, which proves to be essential for the healing and affirmation of black female bodies and in turn humanity.



# THE NATURAL HAIR MOVEMENT

By: Kamina Wilkerson

AN UNDERSTATED REVOLUTION



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**N**ow more than ever we see black women in the United States wearing their hair curly and chemically unaltered. Nationwide perm sales are declining, more than 26% since 2008, while natural hair product sales (such as leave-in conditioners, styling gels, setting lotions, and curl creams) are steadily rising (“Hair Relaxer Sales Decline”). For centuries, black women have felt immense pressure to straighten their thick, curly hair to not only appeal to mainstream white beauty standards but prevent themselves from jeopardizing their social mobility and employment opportunities (Tracey). Now, however, black women are embracing the way their hair naturally grows regardless of texture, length, or curl pattern.

Today many black women report, upwards of 70%, “going natural” or transitioning, a process in which the chemically-altered hair is allowed to grow out and is trimmed gradually (“Hair Relaxer Sales Decline”). The increase in sales of curly hair products, as well as, the visibility of celebrities who have chosen to ‘go natural’ such as Emmy award-winning actress Viola Davis, has captured the rest of America’s attention. The natural hair movement represents the first time in the nation’s history, that wearing natural hair is considered socially acceptable and has likewise risen to such popularity in the African American community. For this reason, alone, the natural hair movement is revolutionary. It is not, however, a sudden phenomenon. Due to the changing beauty standards in the US as reflected in mainstream media, the prevalence of social media in communication, and the ability of black women to redefine and reassert their own standards of beauty, the natural hair movement has gained momentum in recent years, changing what it means to wear natural hair and what it means to be beautiful.

### Changing Mainstream Beauty Standards

Black hairstyles are often equated with political statements. The afro, for example, is commonly viewed as a militant symbol of black pride. Due to the political nature associated with black hairstyles, the political environment of the country at any specific moment is likely to influence the common or acceptable hairstyles in the

black community. Unlike the Black Power Movement of the 1960’s and 1970’s, however, the natural hair movement has represented a time in which the shift in beauty standards, more so than the political environment, has affected the popularity of natural hairstyles. The mainstream media has moved towards coverage of more diverse forms of beauty, often encompassing beauty ideals unique to different cultures. This shift in mainstream beauty, in part, explains why the natural hair movement has been able to rise in popularity. Black women can feel more comfortable wearing hairstyles once seen as socially unacceptable because they are now represented in a more positive light.

The American standard of beauty is a dynamic concept that changes from decade to decade and year to year. Certain fashions and idealized body forms of one decade are not guaranteed to carry into the next. For example, in the 1950’s the curvy hourglass figure of celebrities such as Marilyn Monroe was the ideal and classic, feminine beauty was the standard. By the 1960’s, however, a rejection of this ideal for a more flat-chested, boyish appearance mirrored the sexual revolution of the era (Runkel 52). Although each era of beauty and fashion have been very different, each had distinct, particular styles that were the beauty ideal. Recently, however, there’s less one universal standard of beauty as there is a multitude of beauty paradigms that women can emulate, drawing from beauty ideals in African American, Hispanic, and Asian communities (Runkel 52). Celebrities from diverse backgrounds such as Kim Kardashian, Jennifer Lopez, and Beyoncé are all considered beautiful although they don’t share

a common “look.” Therefore, the new beauty ideal has morphed into uniqueness that highlights natural beauty, no matter where in the world it originates. This shift towards more diversity of beauty at one given time has provided a climate for black women to be more comfortable expressing their authentic beauty, making it more socially acceptable for black women to wear their natural hair.

This new mindset in the beauty industry is in direct contrast with the black woman’s reality for much of America’s history. In the past, adopting white standards of beauty by straightening curly hair and trying to lighten dark skin protected black women to a certain degree (Tracey). Women who had more European features—lighter skin, less curly hair, thinner noses—during slavery were

more likely to work in the slave master’s house where conditions were not as severe as in the fields. Also, post-slavery, these women were more likely to be able to elevate in society. Entrance into black churches, sororities, and other civic organizations would depend on the presence of whiter features as determined by the brown paper bag and fine-tooth comb tests

(Lester 205): if her skin were lighter than a brown paper bag and her hair’s curl pattern were of a looser texture, she was allowed access to these organizations. As exemplified by these examples, straightening hair was associated with relative success and comfort in society. Emulating white beauty ideals, even if marginally, opened the horizons for black women. In the current day, however, beauty ideals are no longer aligned so heavily towards white ideals. Therefore, black women who choose to exhibit their natural beauty through natural hairstyles can do so socially with fewer ramifications. Whereas in the past, certain organizations banned these women from joining or would bar them from social mobility, black women today have less of those concerns, explaining why the natural hair movement originated in the 2000’s as opposed to any other time in history.

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The changes in the standards of beauty have manifested primarily in the music industry and in between magazine covers. Although music often is produced for the auditory enjoyment of the listener, music videos tend to reflect notions of beauty, romance, youth, and more. Magazines are similar in that even though their primary goal may be to inform readers about fashion, health, cooking, or the like, ideas about beauty are often conveyed through the choice of models in advertisements. Englis, Solomon, and Ashmore created a study looking into the beauty ideals that magazines and music videos chose to present to consumers. The different looks could be split into six categories: Exotic/Sensual, Trendy, Classic, Girl-Next-Door, Sex Kitten, and Cute. They found that in cutting-edge fashion magazines such as Vogue and Glamour the Exotic/Sensual and Trendy looks

were most prevalent. Similarly, the majority of music videos showcased a Sensual/Exotic look, characterized by models or actresses of non-white heritage with an ethnic background (Englis 54-57). The prevalence of this beauty ideal in popular media over more classic, traditional looks further reveals the acceptance of diverse

expressions of beauty.

Furthermore, the beauty product industry has diversified its target audience, producing a snowballing effect of further reaffirmation of black beauty. As minorities have made up a larger portion of the population, companies have marketed specific products and services towards this audience (Ede 119). One example is how some traditionally non-black hair-care brands such as Dove, after the popularity of the natural hair movement, are now appealing to African American women by advertising hair care products designed for curly hair. This phenomenon is coupled with the Beauty Match-Up Hypothesis, explaining that companies often choose models whose beauty match the advertised product in order to create a cohesive, believable message for the consumer (Solomon). As businesses try to tap into the purchasing power of people of color, likewise the advertising used to reach



that goal showcase a more diverse set of models. When women of color view models in advertisements who exemplify their ideals of beauty, it serves to perpetuate that ideal in a positive feedback cycle. For black women, seeing black women with natural hair in advertisements also solidifies the social acceptability of natural black hair. As the natural hair movement has grown so has the number of famous black women who have chosen to wear their hair natural, in turn inspiring black women to follow in their footsteps. Jemima Oso, for example, a Nigerian-American woman from Phoenix, Arizona, looks forward to the summer when her hair will be long enough for an asymmetrical cut similar to one of Lupita Nyong'o's signature hairstyles. "For me, Lupita Nyong'o is such a goddess because she has that short, natural hair and is, you know, in the media, has been called the 'Most Beautiful Woman in the World,' can rock these different hairstyles. I always think to myself 'wow my life would be so different if I saw her when I was younger, you know.' Just because it's the first time and still really one of the only representations of a natural black woman's hair that looks like mine (Oso)".

## The Role of Social Media

Social media has been crucial as a catalyst for the vitality of the natural hair movement. Outlets such as YouTube and natural hair blogs have widened the movement's scope by allowing the trend of natural hair to permeate the households of black women all around the U.S. Black women from coast to coast have now become connected to one another thanks to social media. Since one person does not govern social media but a community of individuals, the natural hair movement's utilization of social media shows the desire and drive of black women to create a platform to not only educate, but support one another. This phenomenon in of itself is revolutionary as a self-created, self-perpetuating female-led movement. Without social media, the natural hair movement may never have reached the scale seen today.

The tantamount role of social media in the natural hair movement has been to educate millions of black women about how to care for, style, and maintain their natural hair. It is not uncommon for many black women to have had their hair permed for the majority of their lives. When they decided to "go natural," they did not know how to best approach caring for their natural hair which

# The tantamount role of social media in the natural hair movement has been to educate millions of black women about how to care for, style, and maintain their natural hair.



they had become estranged from for so long. Jenna Jones, a woman with natural hair from North Carolina, recounts her experience transitioning between relaxed and natural hair. "I watched so many YouTube videos. That was like my life. I would go to school, come back and just watch YouTube videos on natural hair (Jones)." For her and many other women, natural hair tutorials on YouTube helped ease the transition between caring for different hair textures.

For most of history, black women have been discouraged from engaging with and embracing their curly tresses. During the times of slavery, slaves did not own the treasured combs that were used in Africa to style and detangle hair. Many slaves would wear headscarves to hide their hair that often was unkempt and or damaged (Thompson). After slavery black women, to better assimilate into society, would imitate the straight styles of white women. Before the invention of the perm in the early 20th century, the hot comb popularized by Madame CJ Walker would be used to achieve desired straightness (Thompson). Black women via social media serve as educators to other women who likely have generations of women who are also unable to style their natural, unprocessed hair. What is remarkable about these women who create videos on YouTube or share their hair journeys on blogs is that the majority of them are not hair stylists by trade. Rather the majority are everyday women who share the trials and tribulations of transitioning to natural hair for the benefit of other women (Rhone). Naptural85, EvelynFromTheInternets, and NikkiMae2003, for example, are prominent natural hair YouTubers who share tutorials, hair product reviews, and styling tips. Hundreds of thousands of women subscribe to these channels to learn more about the journey to healthy hair (Naturally Curly 2013).

Another key aspect of social media is that it

allows for increased flexibility to address the needs of women with all textures of hair. Traditionally, women who had finer naturally, looser curls were seen as having “good hair.” Those women who had hair that was short, thicker, and more tightly coiled were seen as having “bad hair” (Rosado). Women with “good hair” were prized for their natural hair whereas women with “bad hair” would be encouraged to straighten it in shame. This dynamic sometimes makes it difficult for women who have hair that is thicker and tightly-coiled to transition into being natural because the locus of beauty is near those women with traditionally “good hair.” Social media, however, provides educational tools that serves the needs of all the members of the community it appeals to. As mentioned before, the women on social media who upload videos and update natural hair blogs are not typically professional stylists. Since natural hair comes in so many different textures, lengths, and curl patterns, real women with any permutation of the aforementioned characteristics can share their natural hair journeys with their viewers or readers. According to a popular hair typing system created by salon stylist Andre Walker, 4C hair, the most tightly-coiled hair type, tends to be the driest, requiring exceptionally thorough moisturizing routines and gentle handling. A popular blog called 4C Hair Chick, for example, provides resources for women with this particular hair type (“4C Hair Chick” 2015). This flexibility and range of social media significantly expand the role models women can have. Regardless if the media celebrates all hair textures or all hair styles, women are likely to find someone on social media that has hair similar to theirs, reaffirming their beauty and allowing them to care better for hair that may otherwise be labeled as “unmanageable” or “undesirable.”

Lastly, social media provides an online community for black women to find social support. Social media provides the opportunity to share information, create and foster communities, and discuss with one another, giving community members a voice that may not have otherwise been heard (Finin). Historically, issues or concerns affecting the black female community have been marginalized. Social media, however, has recently provided an outlet for black women to discuss and engage with topics that matter to them. This avenue gives black women a voice and contributes to the creation of strong, supportive community. “Going natural” and wearing the hair in natural styles may be an emotionally taxing

process for some women. It is not a guarantee that family members, significant others, employers, or the community they live in will accept their hairstyling choices. Rather, there may be periods in which the woman questions her decision and doubts her beauty. The process of transitioning may take up to one or two years before she is accustomed to styling her hair or until it reaches a length beyond a tiny afro (Hull). These multitudes of factors may leave a newly natural woman feeling lonely, frustrated, and dejected. The online community that natural black women have created, however, provides an outlet for her to seek help from women who have done it before. This powerful tool of shared camaraderie unites and connects black women like never before.

## Reclaiming Black Beauty

A central idea of the natural hair movement is that black women are reclaiming what it means to be beautiful and likewise asserting autonomy over their hairstyling decisions. Since black women have been historically marginalized from mainstream standards of beauty, they have been creative in inventing their own beauty standards especially as it applies to hairstyling. The variety and diversity of hairstyles stem from Africa in which the way the hair was styled often indicated class, marital status, ethnic identity, and more societal indicators (Tracey). The natural hair movement, in this sense, is a continuation of black women’s ability to redefine beauty standards within the black community; however, it is different in that now the ideals set by the natural hair movement are now permeating the rest of society. For example,



Allure magazine ignited controversy when they published an article in their August 2015 issue entitled “You (Yes, You) Can Have an Afro,” teaching white women with straight hair how to achieve a curly afro-like style without acknowledging the afro’s history or even featuring a black model. Also, celebrities have now taken to donning traditionally black hairstyles such as Miley Cyrus who wore dreadlocks to the 2015

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Video Music Awards. Although these are clear examples of cultural appropriation, they also demonstrate how black women are redefining what it means to be beautiful for not only black women but also all women in America.

Black women choose to go natural for a multitude of reasons, many of which reflect the woman's discovery of her natural beauty or ability to make independent lifestyle choices. One of the original motivations of the early natural hair movement was to lead a healthier, more resource-conscious lifestyle. The boxes of popular perm brands provide warning labels that caution of scalp irritation, chemical burns, hair damage, and eye irritation (Lester 212). Perms, if used incorrectly or too frequently, can cause scalp and hair damage that may be irreversible. Many black women who decided to go natural did so for health reasons, preferring to distance themselves from harsh chemicals for nature-based ingredients. Many styling products for natural hair tend to contain more wholesome ingredients that can even be made at home. The founder of the popular hair-care brand Carol's Daughter, for example, began her business in 1993 by mixing hair products in her own Brooklyn kitchen ("Lisa's Story"). According to a study conducted by anthropology researcher Sybil Dione Rosado, black women who wear their hair natural also report spending less time and less money styling their hair than women with chemically-treated hair. The shorter time allows natural women to be able to style their hair at home without needing to book appointments at salons, putting them back in control of their beauty regimens.

Another motivator for many women is to acknowledge their heritage and display cultural pride. Since the times of slavery, black hair was viewed as inferior and repulsive. Minstrel songs created by whites in the nineteenth and twentieth centuries mocked African Americans for the texture of their hair, comparing it to wool and often describing it as nappy (Lester 206). Due to the internalization of racist, white supremacist beauty ideals, black women have developed the "Lily Complex," a term to describe the altering of a black woman's self to assimilate into mainstream white beauty standards that are often unattainable and inauthentic (Tracey). The black women of today, by consciously choosing to wear their hair the way it naturally grows, simultaneously reject the centuries of toxic beauty ideals that have been pushed upon them and their ancestors.



Similar to the Black Power movement, the natural hair movement does embrace reclamation of black pride. However, unlike the Black Power movement, the natural hair movement tends to have more emphasis on discovering authenticity with hair being just one of the avenues in doing so. Ashlea Haney, a multi-ethnic black woman from Oregon, who is currently transitioning, has battled feelings of frustration and self-hatred towards her hair which was unlike that of any of the other women in her family. Since transitioning, however, she has developed a more intimate relationship with her hair:

"I would say that when I style my hair in a more traditionally black way I feel more empowered and that's specifically just because I was never allowed to, not even that I wasn't allowed, I never knew how to do that before. And because I spend so many years hurting my hair. And so to me, to wear my hair in what people would see as more black [styles] like in braids right now feels really empowering, because it feels like I stopped running away from myself and I am happy in my own skin (Haney)."

Lastly, many black women choose to go natural simply because it is trendy. The natural hair movement has origins at the start of the 21st century. It is just recently, however, that the momentum has increased, changing beauty standards nationwide. According to Mintel, a market intelligence agency, 45% of black women believe natural styles are trendy, and 48% believe they exude confidence. For these women, natural hair may be another beauty frontier to explore. Often black hair styles are imbued with particular meanings such as the politicization

of the afro or the self-hatred of the perm. Although it is a popular belief that straightening hair is a sign of shame for one's heritage, some scholars believe that it may simply be another way for black women to express themselves, their creativity, and the versatility of their hair (Tracey). Therefore, it is important to consider that some women may just choose hairstyles regardless of political or ethical reasons. For some women, the way they decide to wear their hair is not a reflection of what they believe as much as how a hairstyle makes them feel.

## The Myth of Self-Esteem Sheltering

Some may argue that the natural hair movement is not revolutionary because black women are substantially insulated from mainstream beauty standards. Earlier studies comparing black and white female adolescent development noticed that white female adolescents tended to be more self-conscious about their weight than that their black counterparts, more often turning to unhealthy, restrictive eating practices. Researchers concluded that black females were sheltered from mainstream beauty ideals by the different beauty standards advanced in the black community, without considering that many black women may be self-conscious of other areas besides weight (Poran). This claim, however, as studied by researcher Maya Poran, proves to be inaccurate. Black female adolescents reported experiencing competing pressures from both mainstream American culture and from beauty ideals advanced by black men. This push-and-pull that many modern black women face exemplifies the significance of the natural hair movement. Regardless of the perceptions of black men or the impossible standards created by the media, black women have continued to redefine what beauty is to them and reconnect with their authentic selves.

## Conclusion

The natural hair movement, as every newly formed movement, is still blossoming and taking on new shapes and forms. One of the fundamental questions is if it is just another trend in black hairstyles or if it is here to stay. We have seen the Black Power Movement and its accompanying Afro fade as a relic of the 1960's and 1970's; can we expect the same of the natural hair movement? Although similar, these two movements are not a fair comparison. For many black women, the natural hair

movement signifies much more than just cultural pride. It signifies an attempt at a healthier lifestyle, a more authentic existence, and a redefinition of the meaning of beauty. The confines of the natural hair movement are not limited solely to a return to blackness. For the first time in history, black women are allowed to be their true physical selves in society and have worked together to encourage each other to make the transition, in many ways, into liberation from the confines of beauty. And because of their efforts, black hair is now synonymous with beauty not only in the insular bounds of the black community but in the wide expanse of mainstream beauty. Black women have created the spaces needed to express what beauty means to them and confidently beckoned the world to follow.

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# A CONVERSATION ABOUT BREAST CANCER ADOVACY WITH DR. KRISTEN ABATSI MCHENRY



By: Abiana Adamson & Naija Brown

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In the month of October, organizations, schools, companies and a multitude of products, from Oreos to the NFL, turn pink to raise awareness and funds for breast cancer prevention and research. The Komen Foundation, a notable charitable organization with a mission to “save lives and end breast cancer forever”, raised over \$242 million from the public in the 2015-2016 fiscal year (Komen Foundation, 2016). The Komen Foundation works with corporate partners like Ford and American Airlines to achieve the goal of ending breast cancer. Spelman College similarly participates in the Pinktober festivities for breast cancer with a student government sponsored walk and several pink balloon releasing events.

Over the past several years, Dr. Kristen Abatsis McHenry, a Spelman faculty member of the Comparative Women’s Studies department has traveled across the country to speak with institutions and individuals highly entrenched in cancer advocacy like the Komen Foundation. McHenry’s research centers on both the pink and green aspects of the breast cancer movement in the United States and critically addresses the consumer-based activism visible in breast cancer advocacy.

Dr. McHenry engaged in a conversation about her new book, *The Green Solution to Breast Cancer: The Promise of Prevention*, and research with Naija Brown, a managing editor at Continuum. As a comparative women’s studies major and aspiring physician, Naija has spent a great deal of time investigating women’s health disparities.

Below is an abridged transcript of their conversation.

**Brown:** Could you share with our readers your motivation for writing your book, *The Green Solution to Breast Cancer*?

**McHenry:** My aunt is a breast cancer survivor and during graduate school my entire family participated in a sort of family reunion in the Susan G. Komen For the Cure Walk. Each year we would go to offer our financial and emotional support to my aunt.

One year at the walk, I started to think about why I was there? What I was accomplishing? Then I started digging a little deeper into really how much I was donating. I began to realize that I was donating very little but spending a lot.

So these questions then arose for me – Where does all this money go for breast cancer research? What is it actually for? What do organizations like the Komen Foundation actually do?

On top of that, I noticed that these walks felt very powerful. We were all together wearing pink and having this energy of support focusing on life and survival. Then immediately after the walk would finish, we would walk through the balloon finish line. There we would be handed freebies: Yoplait yogurts, Nutrigrain bars, frisbees, visors, and you

could sit in a Ford Mustang.

As a social scientist, I was curious about this change, where all of a sudden this walk becomes a moment of marketing. You shift so quickly from feeling like an activist, or an advocate at the very least, to a potential consumer.

I wanted to ask those questions, so that really motivated me to start my dissertation on breast cancer politics, which ultimately lead to my book!

**Brown:** It is amazing how asking the right questions can grow into an entire research project!

I am interested in public health and hope to conduct research concerning health disparities.

Do you think that the often-individual centered focus of the pink movement to end breast cancer prevents scientists and policy makers from asking the right questions?

**McHenry:** Great question! Communities of color, and specifically poor communities of color are much more likely to live in environments that are toxic and are more likely to live near a landfill. Sometimes the drinking water is more likely to be polluted. White women and black women get mammograms at about the

same rate. Yet black women are much more likely to die from breast cancer. So there are issues of structural racism there, which messages about early detection are not necessarily going to solve.

Now, the Black Women's Health Imperative is focusing right now on the conversation about when to get a mammogram and how that will impact mortality rates for black women. I think that is something to watch and pay close attention to if you are interested in this issue.

**Brown:** I'll have to look into this. What are ways Spelman students or the college can pivot away from consumer activism?

**McHenry:** That is a great question. Certainly we just had October or what I would call, 'Pinktober', which was very evident here at Spelman. I saw pink ribbons everywhere. There was a walk on campus, there were tables, and I know students who participated.

I asked them, why did you walk?  
- Students responded "I don't know."

I asked again saying there must be some reason.  
- They said "To support women with breast cancer."

Wanting more from them I asked, well what did you walk for? Did you raise any money?  
- Students responded "Well, I don't know."

Lastly I asked, do you have any idea where that money went?  
- "No, maybe the Komen Foundation."

I would encourage Spelman students to question the type of activism they are doing. Do not walk for the sake of walking or the symbolic gesture. Follow that money, find out where it is going, and then check to see if the organization focuses on strategies preventing breast cancer.

I would also challenge Spelman students to start thinking about what motivates them to buy products with pink ribbons and investigate where that money is going? So if you are buying Reebok products with pink ribbons, food, or even something in the bookstore—dig a little deeper.

I also encourage Spelman students, especially the ones that take my classes, to investigate the personal care products they are using and find out what chemicals are in them. Are these chemicals cancer causing or linked to causing cancer? Using the Skindeep Database is a good step for checking the toxicity of your personal care products.

**Brown:** I actually went and did that! I saw that what usually raised the toxicity rating was the "fragrance" ingredient, which was often unknown.

**McHenry:** Fragrance is a catch-all that companies use to claim that the ingredients are "trade secrets", so they don't want us to know. What's problematic is that those unnamed chemicals are sometimes the most toxic. I would encourage you to go home and throw out your products that have fragrance as an ingredient. The legislation right now does not allow us to ban unhealthy chemicals, or to even test to know which chemicals are problematic. We really need better legislation, so that we are not just randomly testing our bodies to see what is or isn't dangerous, because that's unacceptable.

**Brown:** Can you elaborate on the role of government at all levels in the cancer industrial complex?

**McHenry:** I think that breast cancer is a politically sexy issue – in the sense that Republicans and Democrats can often get on board and say they support breast cancer with no cost to them. At the federal level, I would like to see a clearer focus on prevention and more of our budgets going towards researching environmental causes of cancer. I want to see follow up from the President's Cancer Panel, which admitted that we don't yet know the true extent of environmental links to cancer.

At the state level, California is a good model. California has done some important work in getting legislation that better protects its citizens – such as stores having disclaimers on products warning of possible links to cancer and more regulations on companies. I want to see better regulation of chemicals and use of precautionary principles at the state and federal levels.

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# ABSTRACTS



Research is formalized curiosity. It is poking and prying with a purpose.

- Zora Neale Hurston







# Natural Science

## Sustainable Water Resource Management in a Changing Climate: 60-Year Analysis of Three Counties

By: Gabrielle Sherrer

This research project involves study of three counties within the Metro Atlanta Region; Fulton, DeKalb and Clayton, with respect to two critical changes over the last six decades: precipitation and population. Our study measured the level of understanding and foresight of the probability of floods and other threatening extreme climatic events by surveying city officials, engineers and planners. The comparison between past and present rainfall events, over a 60-year-span, has allowed us to demonstrate the non-stationarity in extreme rainfall risk in Georgia. Such analysis is essential for predictions of any future extreme precipitation epidemics and the durability required for current and future water management infrastructure (pipes, culverts, etc.). Our findings of this work have proven that as the population of an area increases, and as we build upon natural resources, the use and necessity of water resource management tools (including the development of stormwater infrastructures) increases with the urbanization of that area. Decisions related to stormwater infrastructure management (replacement and maintenance) should include information on climate change. Regular inspection and maintenance is required to ensure that in the event of an extreme rainfall event, the infrastructure will be able to maintain the pressure of the maximum rainfall amount. An efficient water resources management approach is one that addresses the biophysical research as well as the human/social component in a holistic manner.

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## Resistin-Mediated Mitochondrial Fragmentation is Associated with Decreased Levels of Mitofusin 2

By: Imani Canton

Our studies indicate that mitochondrial fragmentation is increased in the vasculature during obesity. However, the mechanism is not completely understood. We found that the fat-derived hormone, resistin, is increased during obesity and causes the vascular smooth muscle cells to undergo mitochondrial fragmentation. In this study, we investigated the role of resistin on the expression of genes that regulate mitochondrial fusion and fragmentation. Based on real time PCR, we found that mRNA expression of mitofusin 2, the mitochondrial fusion regulator decreased 25% in response to increasing doses of resistin. Expression of the other regulator of mitochondrial fusion, optic atrophy 1 was unchanged following resistin treatment. In addition, mRNA expression of dynamin-related protein 1 and fission protein 1, which control mitochondrial fragmentation, was unchanged following resistin stimulation. These data suggest that elevated levels of resistin which occur during obesity may down-regulate the expression of mitofusin 2 leading to mitochondrial fragmentation.

## The Effect of Hydroxyurea and Quercetin on Hypoxia-Induced Cell Damage in Sickle Cell Disease

By: Monica McGee

Sickle cell disease (SCD) is a hereditary disorder caused by a point mutation on  $\beta$ -globin, which causes red blood cells (RBCs) to have impaired oxygen transport, and results in tissue hypoxia, or low oxygen conditions. Reactive oxygen species (ROS), or free radicals, may play a central role in hypoxia-induced damage of endothelial cells, which line the inner surface of blood vessels. ROS destroy endothelial cell membranes and release lactate dehydrogenase (LDH), which is a marker of cell damage and inflammation. In this project, immortalized mouse aortic endothelial cells (iMEAC) are used as an in vitro model of human vascular endothelial cells. Vascular endothelial cells in SCD patients have elevated inflammatory states compared to normal endothelial cells due to high cellular stress levels caused by reperfusion injury. Quercetin, a flavonoid, has been identified as antioxidant due to its ability to scavenge free radicals and bind transition metal ions. Quercetin is known to inhibit ROS production and limit the endothelial cell damage caused by excess ROS as a result of hypoxia. Hydroxyurea (HU) is a chemotherapy drug known to induce fetal hemoglobin production but can also be harmful to healthy endothelial cells. The purpose of this study is to determine if quercetin and HU, or a combination of the two, will reduce hypoxia-reoxygenation induced endothelial cell damage. Immortalized mouse aortic endothelial cells (iMAEC) will be grown under hypoxic conditions and LDH will be measured as a marker of cell damage using a colorimetric assay. We expect that a combination of HU and quercetin treatment will provide maximum cell

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## Mass Balance Change at Engabreen

By: Qaasimah Alexis Lang

The purpose of this research is to identify trends in ablation and accumulation in Engabreen, a glacier in the Svartisen Ice cap in Norway. This paper looks at what factors have contributed to Engabreen having a positive mass balance most years since 1970 while many other glaciers in the region are retreating. The variables collected for this study are the overall mass balance, annual and seasonal precipitation, and summer temperatures. Engabreen's mass balance measurements were acquired from several journals from Glaciological Investigations in Norway. Mass balance values were acquired by the Norwegian Water and Energy Directorate through the use of stakes, probe measurements, and snow-coring. The precipitation and temperature data was collected from the Norwegian Meteorological Institute. Engabreen is located over the Svartisen Subglacial Laboratory. The results have shown that precipitation in Engabreen has increased over time by 0.0015% and that the mass balance of Engabreen has gotten less positive by 0.015% over the past 40 years. Summer temperatures have increased by 0.0166% while winter temperatures are increasing twice as fast at a rate of 0.0428% annually. Analysis of the results has shown that though Engabreen is growing, as temperatures continue to rise they will cause an increasing amount of ablation. Looking at data compiled from 1970-2010 it is clear that while the glacier Engabreen is indeed still advancing, the rate of accumulation and positive mass balance is decreasing by 0.015% with each year and may eventually cease to advance. Although Engabreen is predicted to see more precipitation in the coming years (113% increase by 2100), increased temperatures will likely cause more ablation than accumulation and Engabreen will begin to retreat like many glaciers around the world, losing on average anywhere from 0.5 to 1 meter in ice thickness annually.

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## Aging Effect of Hematopoietic Stem Cells

By: Faith Lyons

Aging is associated with a marked increase in a number of diseases, including many types of cancer. Thusly, aging is associated with substantial changes both inside cells and in the cellular environment. Similar to most organs and tissues, the hematopoietic system shows evidence of aging. In order to explain the properties of an aged human hematopoietic system that may predispose to age-associated hematopoietic dysfunction, we evaluated hematopoietic stem cells (HSC) and other hematopoietic progenitor cell populations from healthy, hematologically normal young and elderly human bone marrow samples. We found that aged human HSC increase in frequency, are less quiescent, and exhibit myeloid-biased differentiation potential compared to young HSC. These age-associated alterations in the frequency, developmental potential, and gene expression profile of human HSC suggest hematopoietic aging is an evolutionarily conserved process.

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## Interactions Between Cis-Acting Replicating Element of Hepatitis C Virus and Host Cell Factors

By: Martine Williams

The Hepatitis C virus is single-stranded positive sense RNA virus with diverse functional domains within its genome. One of these is the cis-acting replicating element that has been previously reported to negatively regulate viral translation and is necessary for a correct viral translation. The aim of this work has been to study the interaction between cellular host factors, specifically with translational machinery, and the cis-acting replicating element. To this end, the Hepatitis C virus subgenomic region that contains the cis-acting replicating element was in vitro transcribed. Subsequently, chemical probing of CRE element was performed to analyze the binding of translational machinery by Selective 2'-hydroxyl acylation analyzed by primer extension with a fluorescently labeled primer. This process was conducted in three steps: treatment of cis-acting replicating element from Hepatitis C virus genome with NMIA reagent, reverse transcriptase-mediated primer extension, loading in capillary electrophoresis and informatics data analysis with quSHAPE. Map reactions were set in the presence or absence of previously purified eukaryotic 40S ribosomal subunit from the Huh7, human Hepatoma cell line. Additionally, cloning of two eukaryotic host proteins, previously suggested as CRE interacting factors, was performed. DNAs corresponding to mRNA sequences for heterogeneous nuclear ribonucleoprotein A1 and T-cell intracellular antigen related protein were obtained by retrotranscription and specific polymerase chain reactions. Although cloning of the T-cell intracellular antigen related protein was not completed, heterogeneous nuclear ribonucleoprotein A1 was successfully cloned. Results of the Selective 2'-hydroxyl acylation analyzed by primer extension reactions were positive and are currently under study.

# Social Science

## The Impact of a President's Gender in Argentine and Brazilian Politics: Name-calling in YouTube Comment Sections

By: Faty-Sharon Sylla

Language and gender interact in more ways than we tend to think. The way we interact with each other is often ruled by how we perceive one another, and gender is one determining factor of identity. Our research aims to identify the ways in which female and male presidents are talked about by the general population and the correlation to their gender. We chose to observe Argentinian presidents Cristina Fernández de Kirchner and Néstor Kirchner, as well as Brazilian presidents Dilma Rousseff and Luiz Inácio Lula da Silva. We used YouTube commenters as our informants to keep a transparency as most comments are unfiltered, unlike articles, which would not allow for the raw language used by internet users. We focused on the pessimistic comments for both female and male presidents as a way to compare the types of name calling. We first found that female presidents were subjected to more negative comments than their male counterparts and that, moreover, most of the negative comments toward the females had a relation to their gender, unlike male presidents, who received comments in relation to their comportment, their social class, or their educational background. This shows that sexism is embedded in the way we use language and influences the ways in which we perceive people, even when they hold the same position; their only difference being their gender.

## Concepts of Womanhood within New Black Womanhood and Third Wave Feminism

By: Dru Spiller

Although the term had only started to be discussed in scholarly sociological circles in the early 70's, the concept and ideas behind intersectionality, or how various categories of oppression work together, were around without a name for a very long time. In particular, it pervaded the work of black women writers from Zora Neale Hurston of the Harlem Renaissance to Carolyn Rodgers during the Black Nationalism and Black Arts Movements and continues to be seen in spoken word artists like Staceyann Chin. Black women have the unique experience of being on the lower rungs of not one, but two categories of oppression: race and gender. It was within these intersections of race and gender as well as the Black Power Movement that birthed a concept called "New Black Womanhood". The concept was mostly used by revolutionary black men who felt that with the changing of ideals for black community meant a militant man and a docile woman to serve by his side. However, the idea of New Black Womanhood did not readily suit the revolutionary women within the movement. Their legacy continued and in the contemporary era there have been several successful pushes for women to define who they are as a woman. This paper will analyze two sets of poems in relation to each other as the authors situate themselves in redefining who they are as women. The first set being analyzed are "Revolutionary Dreams" by Nikki Giovanni and "The Last M.F." by Carolyn Rodgers. In these poems the poets are able to situate all of their identities as their natural selves within the context of their own revolution. In Audre Lorde's "Who Said It Was Simple" and Staceyann Chin's spoken "Poem for the Gay Games", the poets have been limited in expressing all parts of their identity by a movement that seeks to be inclusive, but ends up erasing the idiosyncrasies of identity in women who do not live the heterosexual, middle-class, white woman version of mainstream feminism.

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You don't have to be somebody different to be important. You're important in your own right.

- Michelle Obama





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“A Conversation about Breast Cancer Advocacy with Dr. Kristen Abatsis McHenry”  
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Economics



### Briana Brownlow

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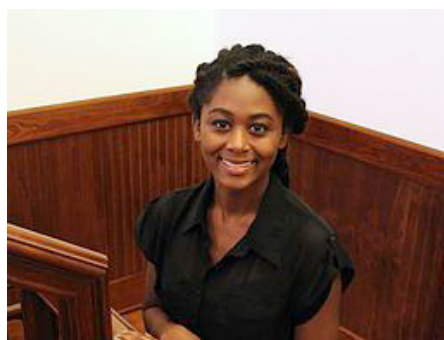
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