FOREWORD

I am pleased to present to you Volume 17 of the Inquiry Undergraduate Research Journal. The Inquiry Journal was developed by the Teaching Academy of the University of Arkansas and is supported financially and conceptually by the offices of the Provost and the Vice Provost for Research and Economic Development. Inquiry provides a forum for sharing the research and creative endeavors of undergraduate students and their faculty mentors at the University of Arkansas.

Volume 17 of the Inquiry Undergraduate Research Journal features the unique contributions of four undergraduate student authors and their faculty mentors. Their research and creative endeavors span diverse fields at the University of Arkansas, including Psychological Science & Music, Latin American & Latino Studies, Economics, and World Languages, Literature, & Culture. Stephanie McCullough and her faculty mentor, Dr. Elizabeth Margulis, integrated music and psychological science to explore whether overt motor involvement and imagined motor involvement induced Involuntary Musical Imagery (INMI) more frequently than passive learning. Turning to Latin American and Latino Studies, Rachel Yeager and faculty mentor, Dr. Luis Restrepo, conducted a longitudinal case study to explore evidence of media bias among four newspapers in Argentina. In the field of Economics, Tyler Salminen and faculty mentors, Drs. Javier Reyes and Jingping Gu, examined the relationships between non-traditional monetary policies of the Bank of Japan and the Federal Reserve and the dollar/yen exchange rate. Finally, in the field of World Languages, Literature and Culture, Mark Nabors and his faculty mentor, Dr. Kathy Comfort, compare the narrator-protagonist in La Honte sur nous with the protagonist in Le Gone du chaâba in an effort to examine whether the former novel can be classified as Beur fiction. Please join me in congratulating our authors; I hope that you enjoy this edition of the journal as much as we have.

I would also like to extend a special thank you to the many faculty members who volunteered their time and expertise to provide comprehensive reviews of student manuscripts. While we are unable to publish all of the submitted manuscripts, we want to thank the students and faculty mentors for their diligent efforts.

We plan to publish Volume 18 of the Inquiry journal in March 2015. I encourage undergraduate students and faculty mentors to consider the Inquiry Undergraduate Research Journal for future publication.

Marcia A. Shobe, Editor
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*Cover image by Rob Byrd Designs*
The Effect of Motor Involvement and Melody Truncation on Involuntary Musical Imagery

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Abstract

The term “earworm,” also known as Involuntary Musical Imagery (INMI), refers to the phenomenon of an uncontrollably repeating melody in one’s head. Though ubiquitous, it is comparatively under-researched in music cognition. Most existing studies have identified the defining characteristics of earworms, rather than explore their underlying mechanisms. This study investigates the hypothesis that overt motor involvement (humming, singing, tapping) and imagined motor involvement (imagining a continuation to an interrupted melody) will induce INMI more frequently than passive music listening. Four groups of participants were given instructions for different types of responses while listening to music; then they completed the same monotonous activity. After the music-listening and visual tasks were over, participants were asked to report on any earworms that occurred during the session and answer general questions about earworm experience. Results indicated that vocal and physical involvement, but not an interrupted tune, increased the frequency of triggered INMI.

Background

Auditory and Musical Imagery History

Auditory imagery is a prevalent and important phenomenon. It not only provides the cognitive tools needed for musicians to advance their craft, but it allows audiences to recall the inflection and timbre of speech. This type of cognition is shared by all who can hear, and with it, people are able to remember and learn through sounds, from the softest whispers to the most bombastic cacophony. Intons-Peterson (1992) referred to auditory imagery as “the introspective persistence of an auditory experience, including one constructed from components drawn from long-term memory, in the absence of direct sensory instigation of that experience” (p. 46). Musical imagery is a specific type of auditory imagery. Bailes (2007) describes this particular experience as “imagining music in the ‘mind’s ear’” (p. 555) and defines musical imagery as the experience of imagining musical sound in the absence of directly corresponding sound stimulation from the physical environment.

Despite wide prevalence (Liikkanen, 2008), Involuntary Musical Imagery (INMI), a specific type of musical imagery, has only recently begun to attract attention in the laboratories of psychologists. The term INMI refers to the uncontrollable occurrence of repeating fragments of music in the brain and is often characterized as “intrusive” (Beaty et al., 2013). This phenomenon is more commonly known as “earworms,” a term derived from the direct translation of the German word, ohrworms. In French they are known as musique entêtante, “stubborn music”, and in Italian they are canzone tormentone, “tormenting songs” (Halpern & Bartlett, 2011). Earworms have also been called “stuck song syndrome” (Levitin, 2006), “brain worms” or “sticky music” (Sacks, 2007), “cognitive itch” (Kellaris, 2001), and “sticky tunes” (Williamson, Liikkanen, Jakubowski, & Stewart, 2014). Williamson et al. (2011) described INMI as “the experience whereby a tune comes into the mind and repeats without conscious control” (p. 259).

Previous INMI Research

In the past decade, significant strides have been made in INMI research. Brown (2006) documented his personal, near-constant musical imagery and coined the term Perpetual Music Track (PMT) to describe his intense, continual experience of imagined music. Though this study gave an extremely detailed account of his perspective and outlines some key qualities of musical imagery, Brown’s account was purely descriptive.
Most other studies on INMI also suffer this limitation. The first large-scale empirical work on INMI surveyed almost 12,000 participants online over a three-month period (Liikkanen, 2008). The study catalogued participant musical experience, listening, and activities. The researchers sought to gather information on INMI prevalence; they found that over 90% of their subjects experienced earworms at least once a week. Williamson et al. (2011) explored the everyday onset of INMI. They used data from anonymous callers to a BBC radio show to identify many detailed characteristics of typical INMI episodes. That study serves as a helpful categorization for subsequent research since it provides data that support a prime target attention state for the current experiment.

Previous research on INMI has involved probe-caught experience sampling methods (Bailes, 2007), questionnaires (Floridou, Williamson, & Müllensiefen, 2012; Liikkanen, 2012b), surveys (Halpern & Bartlett, 2011; Hyman et al., 2013; Liikkanen 2008; Williamson et al., 2011), journal entries (Beaman & Williams, 2010; Brown, 2006; Halpern & Bartlett, 2011; Hyman et al., 2013), and interviews (Williamson & Jilka, 2013). Liikkanen (2012a) claimed that the study of this topic as a whole would be greatly served if there was a method to bypass the need for self-reporting because self-reports raise a host of interpretive problems (Halpern & Bartlett, 2011). Beaman and Williams (2010) advised caution toward retrospective self-reports, the main method of data collection in previous INMI research. Beaman and Williams attempted to address these limitations by having participants record their INMI experiences as they occurred. Bailes (2007) similarly had participants provide immediate responses instead of retroactive reports. The current project adopted this methodology and used immediate reporting, building on the wealth of critical descriptive data from previous studies.

**Earworm Induction History**

The small body of existing non-descriptive work on INMI has been conducted quite recently. McNally-Gagnon, Hébert, and Peretz (2009) played five stimulus songs to 36 participants (18 musicians, 18 non-musicians) and provided recording devices and questionnaires for the subjects to use over the next several days. Participants vocally recorded their INMI episodes (referred to as “obsessive” songs in the study) in the 3.5 days following stimuli exposure; then they repeated the procedure after a two-week break. Results revealed that 47% of the subject pool experienced at least one of the target songs as INMI; the most common bit of songs reported was the chorus. In this particular study, non-musicians experienced significantly more INMI than musicians, a finding that is both supported (Liikkanen, 2008; Liikkanen, 2012a) and contradicted (Beaman & Williams, 2010; Hemming, 2008) in other INMI data. The musician/non-musician difference could have been due to a small sample size; the current study attempted to alleviate such bias with a large subject pool.

Another experiment that aimed to induce earworms was conducted by Hemming (2008), with 59 participants. Hemming distributed a CD with 20 “catchy” tunes, one per genre, and asked participants to listen to it as much as possible for up to six weeks; participants were asked to rate their liking for the title and genres of the songs. Subjects were asked in post-hoc interviews to give their own explanations of the phenomenon and recount any INMI tunes. Unlike McNally-Gagnon et al. (2009), musicians and non-musicians displayed no significant differences concerning INMI episodes. Hemming found the most common activities in which people in the study experienced earworms occurred when they were ‘doing nothing special’, engaging in background activities, traveling in a car/train, or waiting. This study probed some interesting details about the earworm experience; however it depended on retroactive self-report from participants.

In two experiments on the Internet, Liikkanen (2009) used a single-trial design and disguised the intent of INMI induction from 9,967 participants. Liikkanen aimed to trigger earworms using cued recall. In the first study, participants completed missing words from the lyrics of five contemporary songs; INMI induction was successful in 67.1% of cases; average familiarity was 71.5%. The second study was similar but replaced four of the five previous stimuli with classic songs with an average familiarity of 91.2%, but earworm induction success rate decreased to 49.6%. In the second study but not the first, a recency effect was demonstrated through a higher average INMI experience for the song in the last serial position. The method of recall used in this study by Liikkanen could be problematic in earworm investigations since participants were asked to fill in song lyrics. Later, Liikkanen (2012a) conducted a
study to see if it was possible to experimentally induce INMI and to investigate the factors that influence its emergence; he once again employed methods of cued recall. Using written lyrical cues, Liikkanen worked on the assumption that memory activation might lead to INMI. With familiarity controlled, earworms were successfully triggered for over 50% of the participants. Liikkanen (2012c) recommended that future work adapting his induction methods should better control presentation time, stimulus, sequence, familiarity, and strategic selection of cues.

Hyman et al. (2013) attempted to induce earworms by playing music at the end of a seminar. They had participants record their preference and familiarity of the songs as well as any INMI occurrences. Results revealed that intrusive songs were more often those well liked and well known by the participants. Subjects experienced INMI both during low cognitive activities (e.g., walking, daily routines) and during mentally challenging activities (e.g., schoolwork). The connection to school was likely influenced by the setting in which the songs were originally heard; participants recorded that they were thinking of that particular class 65.8% of the times when a song returned. In another experiment included in Hyman et al. (2013), experimenters attempted to induce earworms in a lab setting. Participants were played songs; half were modern popular tunes and half were by The Beatles. Each subject heard three songs with the final song either interrupted or played through completely; then, they completed a five-minute distraction maze task. In congruence with the findings of Liikkanen (2009), researchers found that serial presentation order affected the percentage of time participants experienced earworms both immediately and in the next 24 hours.

In the first lab-based study of the induction of INMI, Floridou, Williamson, and Müllensiefen (2012) carefully attended to Liikkanen’s (2012c) concerns; their experiments were extremely influential and helpful in the design of the current study. Floridou et al. used both within- and between-subjects 2 x 2 factorial design to test the “stickiness” of songs presented, to examine individual differences in INMI induction, to compare two procedures for triggering earworms, to examine serial position effects, and to investigate the relationship between memory/familiarity of the tunes and their ability to trigger earworms. An opportunity sample of 40 participants was tested in this single-blind experiment that involved a “Name That Tune” portion in which subjects heard (a) six songs over headphones and (b) a “Lyrics” portion in which they were asked to fill in missing lyrics of six songs. Stimuli were selected from a database of successful chart songs, half of which also appeared as INMI inducers in an earworm database (“earwormery”) compiled by the researchers of the study. They successfully triggered IMNI through both musical and written cues presented in a counterbalanced order. Their choice of stimuli from top charts and a large earworm database addressed the importance of stimuli selection, a technique that is mimicked in the current project. Results from Floridou et al. indicated that INMI could be induced at comparable levels by both listening to a tune and recalling the lyrics, and it demonstrated that triggering earworms can be even more successful in a controlled lab setting.

Motor Involvement

The connection of motor involvement to music is often studied in terms of rhythmic perception or musical performance. In a review by Krumhansl (2000), the author concluded that the extant evidence suggests that an underlying temporal patterning in music provides a perceptual framework for remembering events in time. This supports the idea of the unique temporal aspect of musical imagery. Krumhansl also asserted that the existence of a fundamental pulse potentially suggests that a common internal oscillator may affect a variety of behaviors; this assumption carries with it an implied link between motor performance and the perception of rhythm. Chen, Penhune, and Zatorre (2008) conducted two functional magnetic resonance imaging (fMRI) studies to determine if motor regions of the brain were still involved during passive music listening. They found that perceptual events are often related in an inextricable manner to motor actions. Importantly, their work revealed that participants were primed for action when they heard music, regardless of whether they consciously planned to move or not. This study demonstrates the close tie between music listening and movement, a link important in the design, hypothesis, and conclusions of the current study.

There have been a number of studies in the past that have investigated the role of motoric involvement and music, but few have probed the interaction of this involvement with INMI. Williamson et al. (2011) clas-
sified rhythm as an associative memory trigger, observing that it can be comprised of heard or felt rhythmic activation. No INMI studies to date have directly investigated the potential relationship between movement and earworm likelihood; this is another shortcoming in the INMI literature that fails to move beyond descriptive data. Floridou et al. (2012) observed a positive correlation of INMI frequency and pleasantness with a body measure that explored musicality through bodily responses to music, from the Goldsmiths Musical Sophistication Index. The researchers discussed the idea that this correlation may potentially have another mechanistic role in the experience of earworms. “It may be that people who hum, sing, tap, or clap along with music experience more frequently INMI as a result of an increased activation of areas of the brain related to musical production” (p. 304). Chen et al. (2008) suggest that tapping synchrony engages the presupplementary motor area, the supplemental motor area, the dorsal premotor cortex, the dorsolateral prefrontal cortex, the inferior parietal lobule, and lobule VI of the cerebellum. These areas of the brain contribute to control of movement, planning movement, working memory, cognitive flexibility, interpretation of sensory information, and motor control. This elaborate cognitive activation could mean that engaging with music kinetically makes music more memorable, and thus induces earworms more easily. The present study included measures that examine how often participants move along to music and the levels of movement during the study.

Williamson and Müllensiefen (2012) discussed a hypothesis that “frequent activations of the brain areas with singing is related to more frequent spontaneous activations that are not under conscious control” (p. 1129). They asserted that the relationship between INMI occurrence and singing cannot be unidirectional and simple because previous research has not supported singers having the most frequent earworms. One study in Williamson and Müllensiefen (2012) used data gathered from 1,536 participants through the earworm database (earwormery.com). Researchers examined scores that investigated relationships among obsessive-compulsive (OC) tendencies, general experiences of INMI, and levels of musical experience and training. The primary analysis included latent factors of musical behavior (musical practice, music professionalism, listening engagement, singing) and INMI factors (frequency, length, unpleasantness, disturbance). Results revealed that the one behavior observed to retain significant predictive influence was singing.

Zeigarnik Effect

The condition characterized by melody truncation was included to investigate the Zeigarnik effect in the context of music. This effect describes how an interrupted task is more memorable than a completed one (Green, 1963). This effect, specifically in regards to music and INMI, has not been widely studied. Hyman et al. (2013) also investigated the Zeigarnik effect and found no difference between interrupted and uninterrupted songs. They did observe evidence of the effect based on participants imagining music immediately after hearing it, thus the tune being personally unfinished. When people continued to mentally “hear” songs after class ended, the tunes were more likely to mentally return before the next class. The current project aimed to observe the immediate Zeigarnik effect as noted in the Hyman et al. study. The idea is that an incomplete musical phrase will tend to carry on in the mind of the listener as he/she will be more actively imagining the tune in effort to complete it. Therefore, the assumption is that an incomplete phrase will “stick” more readily in the minds of participants as an earworm than will a completed phrase.

Hypotheses and Overview

The current study takes an experimental approach to earworm induction targeted at ascertaining factors not fully investigated in the extant literature. The studies described above suggest that it is possible to induce INMI in a lab setting, but this technique has not yet been harnessed to investigate the mechanisms that underlie earworms. This study aimed to examine the effect of motoric involvement (through vocal and physical participation) and melody truncation on the effectiveness of earworm induction.

The primary hypothesis claimed that any involvement (vocal or physical) with music would be more effective than passive listening in inducing earworms. A secondary hypothesis stated that a higher level of activeness in participation with the music would result in increased vividness of INMI and more frequent triggering of INMI. The second main hypothesis was based on the Zeigarnik effect; the truncated melody was predicted to achieve INMI induction more effectively than hearing it all the way through without
participation. Despite passive listening, an unfinished melody was hypothesized to elicit a sort of pseudo-motor activity because the segment of song would insist completion as auditory imagery, and this would activate memory and recall functions in the participant. Other subsidiary points of interest involve the vividness, length of INMI, and number of fragments in regard to participation with music.

For this study, participants were recruited through Experimetrix (the scheduling system used to recruit General Psychology students) and by word-of-mouth advertising. A between-subjects design was used. The dependent variables related to INMI were: frequency of the INMI within conditions and within levels of participation, frequency of the stimuli occurring as INMI, length, vividness, and fragmentation. The independent variables were originally the presentation and directions given when the song played, but levels of participation later became an independent variable. One condition heard the full song played through and one heard the melody truncated in the middle of a line; these two listen-only conditions were instructed to “Remain still and listen carefully.” The remaining two conditions also heard the complete song, but the instructions indicated to participate as the music played. One condition was told to “tap, dance, or sway” and the other condition was told to “sing, hum, or whistle” along.

**Method**

**Participants**

A sample of 123 participants took part in this experiment; three were excluded due to an over write in data. For all analyses, 120 participants (57 male, 63 female), aged 18–59 (M = 20.5, SD = 5.1), were included. Of this group, 10% identified as music majors; 40.8% stated they currently play an instrument, and 75% reported that they had played an instrument in the past. The range of time that participants reported listening to music was 1–72 hours per week (M = 15.7, SD = 14.4). Recruitment announcements of the experiment were made to music majors at Wednesday Recital Hour and were also announced for extra credit in Music Lecture classes. In addition, there were public announcements on several University of Arkansas social media groups calling for anyone to contact the experimenter if interested in the study. A majority of participants (N = 92) were recruited through Experimetrix and were compensated with 0.5 credit for a General Psychology course. Most of the subject pool were comprised of undergraduate students, but a few (less than five) who responded to the posts on social media were university faculty or members of the community. All subjects were randomly assigned to one of four conditions.

**Materials**

An electronic questionnaire was created in MediaLab for this study. Stimuli tunes were chosen based on several different aspects (see Table 1). Two songs (“Call Me Maybe” and “Who Let the Dogs Out”) appeared frequently on online listings of prominent earworms posted over the past ten years, and one (“Royals”) was chosen because of its recent popularity. Williamson and Müllensiefen (2012) analyzed a large group of songs to ascertain qualities of INMI; they described popularity and recency as two major factors that drive earworm occurrences. The last stimulus choice (“Ob-La-Di, Ob-La-Da”) was made in order to include an older selection. This methodology resembles the selection technique used by Hyman et al. (2013) whereby they chose three songs from the Billboard Hot 100 and three songs by The Beatles. In that study, participants were equally likely to experience contemporary music and Beatles music as INMI. All songs chosen for the current study fulfilled the qualities of INMI listed by Kellaris (2001): repetition within the musical stimulus, simplicity, and incongruity. All songs were distributed equally among the four conditions during data collection.

A dot tracking task was created for this experiment. It was a five-minute video file that featured a large white dot (approximately 2.5 inches in diameter on the screen) meandering around a black screen at a slow to moderate tempo. Participants were asked to follow the dot as closely as possible with their cursor using the attached mouse. This task was designed to bore participants because low attention states have been shown to be most conducive to earworm induction. Williamson et al. (2011) classified one prime situation for earworm induction as “mind wandering” (p. 272), a low attention state also discussed by Williamson and Müllensiefen (2012). Data from Hyman et al. (2013) revealed that many activities during which INMI was experienced reflected a low cognitive load. The five-minute length
reflects the length of interpolation tasks previously used in the literature (Floridou et al., 2012; Hyman et al., 2013).

**Design**

The questionnaire featured several different parts. The first was a basic demographic questionnaire given to all participants. After the demographic questions, participants were played a song with instructions varied according to one of the four conditions. No mention was made to dwell on the song after its completion. Participants in the Listen Only, Vocal, and Movement conditions heard the stimuli played all the way through. Those in the Truncation condition heard the stimuli played much of the way through (see Table 1 for exact times) with an abrupt end in the middle of a phrase. At the end of music exposure, participants were instructed to follow a dot around the screen for five minutes while sitting in silence. They were asked to try and keep the mouse as close to the center of the dot as possible and told they would have the first few seconds to put the mouse on the dot.

**Post task questions were intended to capture several dimensions of the earworm experience. Major points of interest included on the post task questionnaire were familiarity of stimuli, INMI induction (both during dot task and later in question session), what music had been imagined, and aspects of the experience such as vividness, length of time, and song fragments. The next set of queries differed by condition; these addressed the behavior of the participant during the music-listening portion at the beginning of the study. All participants were asked how active they participated vocally and with movement; they rated this on a Likert-type scale from 1–7. All subjects were also asked about their normal involvement (physically or vocally) with music, and they answered frequency on a 1–7 Likert-type scale. The final questions in this study explored their general earworm experience. Participants responded how frequently INMI occurs in their lives and how annoying they found the phenomenon. After the sound-attenuated booth portion of the experiment, subjects were debriefed by the experimenter and asked a question about any stress experienced during the dot tracking task.**

**Table 1**

<table>
<thead>
<tr>
<th>Song</th>
<th>Artist</th>
<th>Length*</th>
<th>BPM</th>
<th>Reason Chosen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Me Maybe</td>
<td>Carly Rae Jepsen</td>
<td>3:12 &amp; 2:46</td>
<td>120</td>
<td>recently popular, listed as popular earworm</td>
</tr>
<tr>
<td>Who Let the Dogs Out</td>
<td>Baha Men</td>
<td>3:14 &amp; 2:42</td>
<td>129</td>
<td>prominently listed as popular earworm</td>
</tr>
<tr>
<td>Royals</td>
<td>Lorde</td>
<td>3:09 &amp; 2:45</td>
<td>85</td>
<td>recently popular (top of many charts in 2013)</td>
</tr>
<tr>
<td>Ob-La-Di, Ob-La-Da</td>
<td>The Beatles</td>
<td>3:08 &amp; 2:46</td>
<td>113</td>
<td>very popular artist, not recently popular</td>
</tr>
</tbody>
</table>

* Lengths were edited to remove silence at end of tunes and to end at approximately the same time upon completion. The shorter lengths indicate times for the Truncation condition.

**Results**

A chi-square test revealed no significant difference of INMI induction during the dot task between the four conditions ($\chi^2 = .921; df = 3; p = .820$), but this does not nullify support of the first main hypothesis. The data from the questionnaire revealed that many people in each condition participated with the music in ways that caused overlap between the conditions. In the Listen Only and Truncation conditions, participants were explicitly instructed to “be still” and listen carefully; the Vocal condition was instructed to “sing/hum/whistle” along with the music, and the Movement condition was to “tap/move/dance” along with the music. Data from the questionnaire revealed a widespread compulsion to move along to the music. There were only 19 participants (31.6%) total who sat still and silent in the two conditions of passive listening (Listen Only and Truncation). Of the 60 subjects in these two conditions, the majority ($n = 39$) reported moving in some way to...
the music, and some \((n = 17)\) reported participating vocally. In this same group, 15 participants (Listen Only \(n = 9\); Truncation \(n = 6\)) participated both physically and vocally with the music. All but one (96.6%; \(n = 29\)) subject in the Vocal condition also moved during the music, and 36.6% \((n = 11)\) of the Movement condition also participated vocally. Among all participants in the study, 55 people (45.8%) both moved and vocalized in some way during the listening portion. The inability to keep still among people in the study made it impossible to compare across conditions as intended.

During the dot task, 69 participants reported experiencing INMI. All but one reported that the stimulus song was playing in their heads, and seven participants imagined other music in addition to the stimulus. Of the 69 who experienced INMI during the dot task, all but three reported hearing fragments repeat. These 66 participants recorded fragment repetition numbers ranging from 3–50 with a mean of 13.14 fragment repetitions \((SD = 11.57)\). Of all fragments reported, 55 participants recorded the chorus as either the repeating fragment or one of the repeating fragments. Out of all subjects, only 22 reported earwoms during the dot only; the other 47 people who recounted dot task INMI also experienced it during the question session.

Though not significant, the relationship between conditions and INMI induction during the question session resulted in bigger differences than INMI induction during the dot task (see Table 2). Of the 70 participants who reported INMI during the question session, 23 experienced earworms during only that occasion and not during the dot task; 57 in this group reported imagining the stimulus song, and five subjects within this 57 imagined other music in addition to the stimuli. Of these 70 subjects, 65 reported hearing fragments repeat with mean of 11.67 \((SD = 7.15)\) and range of 1–50 fragment repetitions. Most participants \((n = 49)\) recorded the chorus as the fragment that repeated. Out of the participants who experienced INMI during the question session, 54.29% (38 subjects) recorded that the same music had played in their heads at the beginning of the set of questions. A large majority (89.47%) of this group reported imagining the stimulus song. Of the 32 who said their earworms were not present at the beginning of the questions, 23 (71.86%) reported imagining the stimulus song.

Due to the large population of participants who moved and/or vocalized despite instructions against it, the data were also reanalyzed according to not how the participants were instructed, but to what they actually did. This required a division of subjects into three different groups: participants who reported that they both moved and vocalized \((n = 55; 45.8%)\), subjects who moved but did not vocalize or who vocalized but did not move \((n = 45; 37.5%)\), and subjects who neither moved nor vocalized \((n = 20)\). Those who only moved or only vocalized were grouped together because of the very small number of participants who participated solely vocally \((n = 3; 16.67\%)\) along with the music. The analysis of this grouping resulted in significant differences in INMI induction (see Table 3).

To investigate the secondary hypothesis of activity level relating to vividness of INMI, a non-parametric Spearman’s rank correlation coefficient was
examined. Activeness of physical participation was not correlated with INMI vividness during the dot task ($r_s = .048; p = .725$) nor with INMI vividness during the question session ($r_s = .041; p = .757$). To investigate possible effect of participation on earworm vividness, a Spearman’s rank correlation coefficient was used to analyze correlations among the aforementioned three groups (moved and vocalized, moved or vocalized, neither) and INMI vividness during the study. There was no significant correlation in regards to INMI vividness during the dot task ($r_s = .132; p = .150$) nor among the three participation groups and the question session INMI vividness ($r_s = .173; p = .152$).

The large percentage of people who moved made it necessary to analyze the amount they reported moving per condition. This led to several Mann-Whitney $U$ analyses probing the activeness reported (Likert-type 1–7 scale) of both physical and vocal participation during the music portion of the study and possible significant differences between conditions. Surprisingly, the group instructed to move were more vocally active when compared to those instructed not to move. The Movement condition group was significantly more vocal active when individually compared to the Listen Only condition group ($U = 19.0; Z = −2.388; p = .020$) as well as more vocally active than the Vocal condition group ($U = 95.0; Z = −2.096; p = .040$), but it was only marginally significantly different from the Truncation condition ($U = 21.0; Z = −1.947; p = .062$). Contrastingly, those in the Vocal condition who were instructed to sing/hum/whistle reported significantly less physical participation during the music portion (see Table 4). On average, the Vocal condition participants were significantly less active in tapping/moving/dancing when compared to all other groups individually (compared with: Listen Only $U = 198; Z = −2.131; p = .033$, Truncation $U = 154; Z = −2.142; p = .032$, Movement $U = 265.0; Z = −2.621; p = .009$). Activity level of physical participation was found to be unrelated to experiencing earworms at any point in the study ($U = 680.0; Z = −.815; p = .415$). Activity level of vocal participation was also analyzed, and no significant difference was found ($U = 133.5; Z = −.275; p = .290$).

Another factor queried in the study concerned the usual amount of physical and vocal participation with music per participant. In two separate questions, subjects answered “yes” or “no” to normally engaging with music by humming/singing/whistling and tapping/moving. Based on chi-square analyses, those who normally move ($x^2 = 6.300; df = 1; p = .012$) or normally vocalized ($x^2 = 8.392; df = 1; p = .004$) were significantly more likely to experience earworms at some point during the study. Those who normally moved ($n = 106$) then ranked the frequency of their general participation with each by choosing: Always, Very Often, Often, Sometimes, Rarely, Very Rarely, Never. Though there was no statistical significance found with a Mann-Whitney $U$ test comparing how often people generally move and contraction of earworms during the dot task ($U = 1229.5; Z = − .838; p = .402$), there was a significant relationship between general movement frequency and INMI induction during the questions ($U = 940.5; Z = −2.774; p = .006$). Those who reported moving more often in general experienced more earworms during the questions. Those who reported they normally participated vocally with music ($n = 99$) also marked how often they generally sang/hummed/whistled along with music using the same scale used for movement activity. Similar to the comparison of physical participation frequency, there was only a trend towards significance between the vocal participation frequency with INMI during the dot ($U = 935.0; Z = −1.679; p = .093$), but there was a significant relationship between how often participants participated vocally with music on average and INMI induction during the questions ($U = 770.0; Z = −2.915; p = .004$). Just as with the frequency of physical participation with music, those who normally vocalize with music experienced more earworms.

Gender was found to have a significant effect ($x^2 = 6.277; df = 1; p = .013$) on earworm induction during the dot task using a chi-square test. A total of 43 female participants (68.3% of women) experienced INMI during the dot task, but only 26 male participants (45.6% of men) successfully had earworms during the dot. Unlike during the dot task, the influence of gender was not significant during the question session ($x^2 = 1.452; df = 1; p = .228$) nor for having INMI at all during the entirety of the experiment ($x^2 = 1.362; df = 1; p = .243$). Females were significantly more likely to report experiencing earworms during both inquiry points in the questionnaire; 50.8% of women in the study ($n = 32$) did, and only 26.3% of men ($n = 15$) recorded experiencing INMI during both the dot task and during the question session. Number of hours of reported music listening per week was not correlated with earworms.
induction at any point in the study \((U = 1142.5; Z = -.899; p = .369)\). Music majors and non-music majors showed no significant difference \((x^2 = 1.677; df = 1; p = .195)\) in INMI experience at any point in the study. The same held true for those who reported presently playing instruments versus those who do not \((x^2 = 1.142; df = 1; p = .285)\); there was also no significant difference between those who played instruments in the past and those who did not \((x^2 = 0.248; df = 1; p = .618)\). Familiarity with the stimuli (measured on a 1–7 Likert-type scale) also did not have a significant effect on INMI induction at any point in the experiment \((U = 1273.0; Z = -.097; p = .923)\). Familiarity rating was only presented to those who had heard the song before. For three of the songs, over 90% of participants had heard the tune before the experiment. For the selected Beatles song, only 37% of participants \((n = 10)\) who were played that selection had ever heard it before. The songs did not display significant differences in regard to triggering earworms.

The self-reported INMI experience frequency had a significant relationship to INMI induction. Using a Mann-Whitney U test, earworm induction at any point in the study was significantly higher \((U = 634.5; Z = -4.331; p = .000)\) in those who reported more frequent INMI experience in general. The measure included: Several times a day, Every day, Weekly, Monthly, More seldom, Never. Of the sample, 55 subjects reported experiencing earworms multiple times a day; 41 recorded experiencing them every day. Together, every day and several times a day comprised 80% \((n = 96)\) of all participants. Only 20 people \((16.7\%)\) reported weekly earworms. Just two participants said they experience INMI monthly, one person recorded experiencing INMI more seldom than monthly, and one reported never experiencing earworms before. Average INMI frequency was also significantly correlated with hours spent listening to music per week in a non-parametric Spearman’s rank correlation coefficient \((r_s = –.325; p = .000)\).

Of all participants, 36 reported some amount of stress or excess focus (hereafter, “dot stress”) during the dot tracking task; this defeated the purpose of this low attention task. Those who experienced dot stress were significantly different in INMI during the dot task \((x^2 = 9.628; df = 1; p = .002)\), but this population was not significantly different during the question session \((x^2 = 0.163; df = 1; p = .686)\). Of the 36 participants who reported dot stress, only 36.1\% \((n = 13)\) experienced INMI, and 66.7\% \((n = 56)\) of the non-dot stress population reported earworms during the dot task.

**Discussion**

It was hypothesized that physical and vocal participation with music would increase the amount of INMI in participants. Though the conditions were not very useful in analyses, the primary hypothesis was supported by the data. Participants’ unanticipated struggle in following instructions made it difficult to analyze the data according to the original condition assignments (see Table 5). Half the participants (those in Listen Only and Truncation conditions) were clearly instructed to “be still” as they heard the stimulus song. For the two participation conditions (Vocal and Movement), the caveat likely stemmed from the wording of the instructions; the Vocal group was not explicitly told to be still and the Movement group was not explicitly told to be silent. This was planned in the design because of fear that excessive restriction would cause participants to not engage naturally with the music. Due to the high number of subjects who moved, vocalized, or both, analyses relating to the conditions were pertinent only when looking at the level of activity in which people engaged during the music exposure portion of the study. In consideration of INMI induction in general, those who moved and vocalized were more likely than those who did not, and people who participated in one way were more likely than those who did neither. The sample that neither moved nor vocalized at all was considerably smaller than the other two (see Table 3), but both participation groupings were quite comparable in number.

<table>
<thead>
<tr>
<th>Movement activity level</th>
<th>Vocal activity level</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean rank - 55.62; others = 46.04</td>
<td>mean rank = 40.73; others = 26.87</td>
</tr>
<tr>
<td>U = 806.5; Z = -1.574; p = .115</td>
<td>U = 135; Z = -2.491; p = .013</td>
</tr>
<tr>
<td>mean rank - 36.28; others = 54.43</td>
<td>mean rank = 40.73; others = 26.87</td>
</tr>
<tr>
<td>U = 617; Z = -2.955; p = .003</td>
<td>U = 389.5; Z = -.483; p = .629</td>
</tr>
</tbody>
</table>

All Mann-Whitney U reports are in comparison to all those not instructed to move or vocalize.

Table 4  
Activity Level Relations to Instruction
It was interesting that participants in this study were so compelled to move to the music. Though activity level varied, the number of participants moving in any amount was approximately the same across all conditions and songs. Chen, Penhune, and Zatorre (2008) asserted that music may be catalytic in stimulating rhythmic movements based on their research and on work by Synder and Krumhansl (2001) and others; people often spontaneously synchronize actions with the beat of a tune through tapping feet or nodding along, regardless of musical training or ability. This was strongly supported by the data in the current study. The unsolicited movement and singing were inconvenient in consideration of conditions and random assignment, but it was fascinating from an observational research perspective. The tendency of participants to move and/or sing created the new groupings of data; this meant the division of the subject pool was no longer random. These participatory individuals may have gotten more earworms because of their general involvement with music or related background factor.

The second major caveat of the study was the notable dot stress experienced by 30% (n = 36) of participants. The purpose of this interpolation activity was to reach a low attention state, and the majority of subjects were successfully bored. Unfortunately, the wording and nature of the task caused some people to think of it as a game or view it as a test of vigilance. Those who experienced “immense” stress or “excessive” focus had far fewer earworms than those who did not during the dot task. This seems logical given that the purpose of the task was nullified by the dot stress, and thus the target attention state left unachieved by 36 participants. For this reason, INMI induction rate during the question session was additionally considered on its own, as a pair with the dot task, and for INMI experienced at all in the study.

One concern similar to that expressed by Liikkanen (2012a) should be considered; he noted that attempting to induce INMI at all might be criticized as a conceptual paradox. How could something “involuntary” be experimentally controlled or triggered? Liikkanen (2012a) points out the differences between involuntary memory recall and spontaneous or automatic or controlled memory recall, and he compares it to a administering an irritating skin paste that induces a rash. The paste provides a method of reliably triggering a rash even if the causal mechanisms are not well understood. In the present study, the purpose of analyzing INMI induction during the question session was in part to provide more data with which to compare to individual difference factors, such as frequency of earworms and normal amount of participation with music, to the two potential occurrences of earworms in the study. It was also useful in looking at possible correlations for those who experienced INMI at both points in the study. Liikkanen (2012a) suggested the need for future study on the phenomenology of “induced” versus “spontaneous” INMI experiences (p. 231); the current project attempted to do just that.

A greater percentage of participants reported experiencing the stimuli tunes as INMI during the dot task (98.6%) than during the question session (81.4%). This difference is most likely due to the recency of the song in relation to the dot task, but it is worth noting because of the difference between spontaneous and induced (cued recall) INMI. In the inquiry about current earworms during the post-task questions, no mention was made to the song previously played in the study. During debriefing, several participants mentioned that a song “popped into” their heads when the question was asked. Though cued by written words, this musical imagery still qualifies as INMI. It differs from the INMI experienced during the dot task in that nothing about the dot task could have cued the imagery. Earworms triggered in that task were theoretically due to recent exposure, to the low attention state, and potentially to familiarity and previous exposure. The fact that far fewer participants who felt dot stress experienced INMI supports the suggestion that less stressful activities seem to encourage more INMI occurrences.

The main hypothesis was about the effect of outward motoric involvement on INMI induction, the second hypothesis was about how an unfinished phrase of music (as presented in the Truncation condition) would trigger a mental continuation of the melody. This pseudo-motor activity, supposedly through the Zeigarnik effect, was thought to have a bigger influence on induc-

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Physical and Vocal Participation by Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participated physically</td>
</tr>
<tr>
<td>Listen Only</td>
<td>12</td>
</tr>
<tr>
<td>Truncation</td>
<td>11</td>
</tr>
<tr>
<td>Vocal</td>
<td>--</td>
</tr>
<tr>
<td>Movement</td>
<td>Instructed to</td>
</tr>
</tbody>
</table>

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MUSIC: Stephanie McCullough
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ing INMI during the dot task since it was directly after the music exposure. The idea was that the mind would finish the phrase; the incompletion was hypothesized to create repetitions that could influence later episodes of INMI. As evidenced by the existing, albeit scant, research, the data in this study revealed no support for the Zeigarnik effect influencing earworm induction. The familiarity of the tunes may affect potential Zeigarnik effects. This was supported by low familiarity of one song that also had a low INMI rate in the Truncation condition. Since Ob-La-Di, Ob-La-Da was not as familiar, participants were less likely to continue the unfinished phrase once the music stopped abruptly (see Table 6).

Table 6
INMI During Dot Task by Song and Condition

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Successful INMI during dot task</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Listen Only</td>
<td>Truncation</td>
</tr>
<tr>
<td><strong>Song</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call Me Maybe</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>% within Song Heard</td>
<td>23.1%</td>
<td>38.5%</td>
</tr>
<tr>
<td>% within Conditions</td>
<td>18.5%</td>
<td>27.9%</td>
</tr>
<tr>
<td>% of Total</td>
<td>4.3%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Who Let the Dogs Out</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>% within Song Heard</td>
<td>23.1%</td>
<td>23.1%</td>
</tr>
<tr>
<td>% within Conditions</td>
<td>18.8%</td>
<td>18.8%</td>
</tr>
<tr>
<td>% of Total</td>
<td>4.3%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Ob-La-Di, Ob-La-Da</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>% within Song Heard</td>
<td>22.2%</td>
<td>11.1%</td>
</tr>
<tr>
<td>% within Conditions</td>
<td>25.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>% of Total</td>
<td>5.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Royals</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>% within Song Heard</td>
<td>23.8%</td>
<td>23.8%</td>
</tr>
<tr>
<td>% within Conditions</td>
<td>31.3%</td>
<td>27.8%</td>
</tr>
<tr>
<td>% of Total</td>
<td>7.2%</td>
<td>7.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>% within Song Heard</td>
<td>23.2%</td>
<td>26.1%</td>
</tr>
<tr>
<td>% within Conditions</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% of Total</td>
<td>23.2%</td>
<td>26.1%</td>
</tr>
</tbody>
</table>

Details about how people moved and vocalized with the music revealed some interesting correlations. Almost everyone (96.7%) in the Vocal condition moved, but they had a lower mean average of activity level in physical involvement. This is perhaps because the instructions for that condition told participants to engage in a particular way, so though they were inclined to move spontaneously with the music, their vocal activity likely detracted from attention to their movement. Those in the Movement condition had an opposite reaction; those who vocalized reported to have done it more actively in comparison to the other conditions. This could have occurred because while they were already tapping or dancing along, participants might have been primed to get completely into the groove by singing or humming as well. These two observations of activity level could also be explained in another way; it could be due to relativity in perception. The Vocal group likely could have been more attentive to their singing/humming/whistling during the task. Later on during the questions, they were queried about their physical involvement, and thinking back they realized they did in fact move while they vocalized. Focus on vocal participation might have overshadowed an accurate rating of physical participation. Relative perception might also explain the difference in the Movement; that group was being physically active already, so they may have perceived their vocal participation as more active. These

Graph 1. Physical activity and frequency of normal physical participation
results may also speak to how people perceive vocal and physical activity differently.

Usual physical or vocal participation with music was very common among participants, and a large percentage of those who normally move/sing along to music experienced INMI throughout the study. No participants responded that they participated in either way Rarely, Very Rarely, or Never. Interestingly, participants who reported more frequent participation with music tended to report less active movement in the experiment. This is another potential correlation due to relative perception. Those reported only a moderate frequency (Sometimes; 4 on a 1–7 Likert-type scale) of usual movement had a higher mean activity level (see Graph 2). This could be explained by the fact that their physical participation in the study, whether instructed or spontaneous, felt like a great amount of activity relative to their customary participation. The effect, though not significant with vocal participation, does seem to follow a similar trend to the physical involvement. The lack of statistical power could be due to the smaller sample that participated vocally at all (see Graph 1).

A potential issue with the ratings for activity level is the scale and wording used in the experiment. Participants were asked to rate several measures on a 1–7 Likert-type scale. In retrospect, it may have been a better idea to include different anchor terms for activeness other than “minimally/maximumly active.” The distribution patterns found in the song comparison suggest that at least some of the rating differences were likely due to speed of movements. This scale was chosen to avoid classifying length over amount (or vice versa) and to account for the many different ways participants may choose to physically/vocally participate with music, but the vagueness of the measure had weakness as well. The effect of vividness of INMI was part of a secondary hypothesis. Data revealed no significant correlations between vividness, and this probably had a lot to do with the vagueness of this scale as well. Vividness is a term that needs to be clearly operationalized in the design of the study to yield useful results; this is something future INMI studies can work to improve.

Bailes (2007) reported that the majority of musical imagery episodes recorded were a “repeated fragment” instead of a full run through (p. 562). The majority of participants reported hearing a fragment repeated as INMI, and most of these heard the chorus. This held true both during the dot task when almost all imagined the stimuli songs and during the question session when more experienced other songs as INMI. This finding coincides with previous earworm research that had noted the fragmented quality of INMI (Brown, 2006; Halpern & Bartlett, 2011) and the prevalence of the chorus (Beaman & Williams, 2010; Hyman et al., 2013). Margulis (2013) made interesting observations about how music tends to repeat in the mind:

The unusual repetitiveness of musical imagery parallels and exaggerates the unusual repetitiveness of actual music in the world. The relationship between earworms’ repetitive looping and the uncommon repetitiveness of actual music seems striking, yet to my knowledge this connection has not been pointed out or investigated. (p. 76)

The present study queried about repetitive fragments in efforts to extend the knowledge base on this area, but there were potential problems with the chosen measures. Number of fragments was requested in the questionnaire, but the number could be a confusing one to calculate if the earworm had persisted from the dot task through the question session. Self-report also causes problems; it was not necessarily easy for participants to answer the number of fragments of an INMI episode over five minutes of a boring task. It might have been even more difficult during the questions, while they were working on answering other inquiries, to accurately estimate the number of times a fragment repeated. A better measure is needed to calculate the true repetitiveness of earworm fragments.

Those who reported more frequent INMI in life tended to have more earworms in the study and tended to listen to more music per week. This finding supports previous research that suggests a high level of association exists between musical exposure and INMI frequency (Bailes, 2007; Hyman et al., 2013; Liikkanen, 2012b; Williamson & Müllensiefen, 2012). The “at least weekly” reports of INMI experience (96.7%) reported in this experiment were higher than the often-cited statistic (91.7%) observed by Liikkanen (2008) in a very large Internet survey sample. The much smaller sample size in the current study might account for this difference.

Music majors experienced approximately the
same amount of INMI as non-majors, and playing an instrument currently or in the past had no effect. The lack of musician/non-musician variance contrasts previous findings (Hyman et al., 2013; Liikkanen, 2012a) but supports others (Beaman & Williams, 2010). The current study did not use the same types of scales to delineate musicians and non-musicians as previous studies, so comparison is more general. The role of gender has received mixed support in the extant INMI literature. The current project revealed a significant difference between females and males in earworm induction. In congruence with the work of Liikkanen (2012a), females contracted more earworms, a difference that was not present in works by Beaman and Williams (2010) nor in Hyman et al. (2013). The gender difference was not significant in the question session, but it was in both the dot task and in INMI induction overall. This difference between dot task INMI and question session INMI suggest potential gender bias in cued recall versus spontaneous earworm experiences. Future earworm research should investigate this possibility.

Involuntary Musical Imagery is an extremely common, multi-faceted human experience. The present study has added to the small body of experimental earworm induction with details about the INMI experience such as frequency, vividness, and repetition. This experiment investigated aspects relevant to both pseudo- and outward motoric involvement with music and its effect on contracting earworms. Induction of INMI in a controlled lab setting was very successful with songs of various familiarity, recency, and popularity. Evidence did not support the Zeigarnik effect in music as a method that increases probability of experiencing INMI. More careful consideration should be taken concerning the selection of measures for activity levels and fragmentation, and future studies should elaborate on the effect of participation with music on INMI induction. The conclusions drawn from the current data are that individual differences such as general INMI experience frequency and amount of music heard per week do affect the success of earworm induction, and that physical and vocal involvement with music increases the likelihood of triggering INMI.

References


Government Control of and Influence on the Press in Latin America: The Case of Argentina During the Presidency of Cristina Fernández de Kirchner (2007-2014)

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Department of Latin American & Latino Studies

Faculty Mentor: Dr. Luis Fernando Restrepo
Department of Latin American & Latino Studies

Abstract
Latin American governments restrict the media for political, historical, and cultural reasons. As these governments trend toward socialism, their influence on media increases. This paper examines methods of media control and investigates whether the increased control leads to bias and inaccuracy of information, both of which jeopardize the functioning of a democratic political system. Four newspapers in Argentina were used as a case study; articles from 2004 to 2013 were evaluated for bias and accuracy. The expected outcome was that newspapers sympathetic toward her administration would become more favorably biased toward her while critical newspapers would become more unfavorably biased. In both cases, the accuracy of reported inflation rates would decrease. The results, however, show three newspapers became more neutral, increasingly printing articles that were not government related or that omitted references to the president. The analysis of the accuracy of the inflation rate was inconclusive due to data limitations.

Manipulation of the media by Latin American governments is perceived to be increasing in recent years (NGO, 2011). According to the North American Congress on Latin America, governments limit the freedom of the press to promote national security, to help regulate the economy and to prevent monopolies (Hall, 2012). However, according to Freedom House, a U.S.-based nongovernmental organization that advocates for democracy, governments also limit media to curtail criticism against the government, political freedom, and human rights (Karlekar, 2012).

The prevalence of censorship has varied with the types of government systems. As Latin America shifted from military regimes to democratic leadership in the 1990s, the freedom of the press increased under neoliberal, laissez-faire policies (Karlekar, 2012). However, since around the turn of the 21st century, the freedom of the press has decreased as Latin American governments lean toward socialism. Voters elected leaders such as Hugo Chávez in Venezuela in 1999 and Evo Morales in Bolivia in 2006 because they wanted more equality and justice for the poorer working class (Larraburre, 2013).

An increasing level of censorship is worrisome because government power and policies can virtually achieve prior restraint, defined as the restriction of the publication of information before it is published. Such censorship, when not used solely for issues of national security, is in violation of the American Convention on Human Rights (Berfley, 2010), as freedom of speech is essentially freedom from prior restraint. Restricted freedom of speech can suggest more bias and less public access to truthful information (Glaeser & Sunstein, 2014). “According to a standard principle in free speech law, the remedy for falsehoods is more speech, not enforced silence” (Glaeser & Sunstein, 2013, n.p.). Attempts to restrict the media can result in more bias and a polarization effect. The authors go on to note, “But empirical research demonstrates that corrections of falsehoods can backfire by increasing people’s commitment to their inaccurate beliefs, and that presentation of balanced information can promote polarization, thus increasing pre-existing social divisions” (n.p.). So the more biased the media outlets become, the higher their potential to lead the public astray. Contrary to what one might think, the media outlets with opposing perspectives do not necessarily balance each other out and cause people to consider information from both sides and, as a result, ‘meet in the middle’. Instead, they often reinforce the bias of their audience and lead them away from a more truthful, neutral perspective (Best, 2010).
Thus, restrictions on the media can have serious consequences. In addition to hindering the flow of accurate information from the media to the public, government restrictions can also impede the accurate flow of information from the government to the media. A government that controls what the media do and do not print affects government accountability. The media—most notably, the print media—are the “Fourth Estate” of government; in other words, they act as a watchdog that monitors the three branches of government (Sehgal, 2007). Newspapers and journals provide necessary checks and balances in a government. If the government prevents news outlets from publishing information that puts the government in a negative light, the government hinders public access to truthful information. For example, if media outlets fail to contradict false information the government conveys about economic performance, then the public is misled. An informed public is essential to the well functioning of a democracy. “We can only participate effectively in our democracy if we have the information we need to make informed choices that affect us” (Hartigan, 2009, n.p.). So, because news media must serve as a watchdog, it is imperative that they not be controlled or influenced by the government.

Governments everywhere exert influence over the media, to some degree; however, the governments of Latin America—especially the South American countries of Venezuela, Bolivia, and Argentina—have begun influencing the media in recent years to a degree that is catching the public’s eye. Through explicit and implicit controls, Latin American governments are limiting the media’s watchdog function. Explicitly, officials have passed laws that place limits on the media. Implicitly, the governments provide funding or invest in government promotions (and therefore, revenue) in companies that present them favorably (Karlekar, 2012). Although most countries in Latin America have right-to-information laws (Mendel, 2009), only Costa Rica, Belize, and Uruguay have “free” media, ranging from 1.0 and 2.5 on a seven-point scale determined by a Freedom in the World survey (Karlekar, 2012). Honduras, Mexico, Venezuela, and Cuba have “not free” media, falling on the high end of the scale between 5.5 and 7.0 (Karlekar, 2012). The rest of the countries, which constitute the majority, are deemed “partly free” by Freedom House, meaning that they fall between 3.0 and 5.0 on the scale.

Argentina provides a good case study for this paper since it falls in the middle between the “free” and “not free” ends of the spectrum, making it a representative Latin American country (Karlekar, 2012). Media organizations within Argentina and around the world, however, have strongly criticized the growing measures of control under President Fernández de Kirchner. For example, the Global Journalist, a converged newsroom that covers global news and the challenges to a free press, noted that Argentina fell seven places from 2012 to 2013 in the press freedom rankings by Reporters Without Border (Siegelbaum, 2012). Thus, it seems Argentina might be swinging back toward an authoritarian policy of controlling the press. This is supported by the complaints of members of the opposition in Argentina, who have warned for nearly a decade that the government is headed toward authoritarianism (O’Grady, 2010).

The goal of this study is to evaluate where the media of Argentina fall on the continuum of censorship and to explore whether they are shifting toward being less free of government influence. I went to Argentina in the spring of 2013 (by the U.S. calendar) to attend school and to conduct fieldwork for this study. I solidified my topic and methodology based on my experiences living in Argentina. Based on preliminary discussions with Argentine citizens and a review of four of the top newspapers in Argentina, it was suggested that Fernández de Kirchner was manipulating the media in various ways. As a result, I decided to examine the ways in which her government was perhaps controlling the media, and to investigate the gravity of her influence on the media in terms of what they report. If journalists were being repressed to the point that Argentines were not able to stay adequately informed, then it was important that international organizations address the situation. In addition, because Argentina was a representative country, the results may be reflective of a trend for the whole region, intensifying the importance of the results.

In the following sections of this paper, I investigate the possible ways in which the Argentine president may be controlling the media. I analyze changes in four newspapers during the timespan of Fernández de Kirchner’s presidency to demonstrate the possible effect of the presidency on media content bias and accuracy. I determine whether the increasing number of measures intended to influence the media have caused newspapers to become more biased and
polarized and, consequently, whether the information the papers report has become increasingly inaccurate under the presidency of Cristina Fernández de Kirchner.

Argentina’s history provides the context for understanding the relationship between the government and media. Argentina has a history of polarizing, charismatic leaders (Disney & Williams, 2014), the most notable being the charismatic socialist couple, the Perones. Juan Domingo Perón, who was elected in 1946, argued for the rights of laborers and unions and served as president for 10 years. While his isolationist and spending policies led to sky-high inflation rates, the Argentina people loved and idealized him. His wife, Eva, was said to have co-governed the country with him during the first six years of his presidency (Duarte de Perón, 2013). Juan Domingo Perón was overthrown as president by a military coup d’état in 1955, but he returned to serve a year as president in 1973. During this year, right-wing and left-wing Peronists, or supporters of Perón’s policy and ideals, split and politics became more polarized.

President Néstor Kirchner, a leftist who served from 2003 until 2007, was charismatic, as was his wife who served after him, Cristina Fernández de Kirchner; many consider them to be contemporary “Peronists.” Although “Kirchnerism” is considered to be center-left in terms of political perspectives, the same growing polarization seemed to occur as it did with Perón. For example, Argentines on the streets of Buenos Aires with whom I spoke say they either love or hate Cristina Fernández de Kirchner; very few provided a neutral or balanced opinion.

These extreme perspectives may be, in part, the result of a series of a series of tumultuous political events that caused Argentines to place their faith not in the banks or the institution of government but in their current leader. The 20th century held at least a dozen coups or planned coups. A military dictatorship, the right-wing junta, held power from 1976 through 1983, and more than 30,000 people “disappeared” (General, 2013). The desaparecidos (or disappeared ones) consisted of oppositionists, unionists, intellectuals, professors, students, and journalists who were arrested, tortured, or secretly murdered. Their families never got to bury a body, and bringing justice for their deaths remains a popular political topic.

Economic and corruption problems mounted until Argentina transitioned back to democratic elections in 1983. In 2001, the economy suffered a corralito, a run of private sector deposits, as a result of detrimental lending policies, which led to a scarring economic and social crisis in 2002 that remains on the minds of many Argentines today. The government froze bank accounts and forced Argentines to convert any U.S. dollars in their account to pesos, which had lost more than 75% of their value (Kurtz-Phelan, 2002). Income inequality and poverty increased, and those who had had little before were left with nothing afterward (Molina & Ageitos, 2008). The country’s Gross Domestic Product plummeted, as did employment and wages (Beccaria, Esquivel, & Maurizio, 2005). In addition, the World Bank reported that the risk of maternal death peaked in 2001, surpassing a risk of 1 in 600 (World Bank, 2014); Argentines also complained of human rights violations (Kurtz-Phelan, 2002). Throughout the course of a year, Buenos Aires lost its status as the most expensive city in Latin America and instead became the cheapest city (Anonymous, 2003). The financial crisis shook the faith of the Argentine people irreparably (Kurtz-Phelan, 2002) and harmed the media as well. For instance, ever since the ensuing recession, it is suggested that Argentine media have been more vulnerable to government pressures and corruption (“Argentina: Crisis,” 2003). As a result, the freedom of the press in Argentina has reportedly decreased.

The coups, the junta, the “musical chairs game” of leaders, and the corralito have all contributed to Argentines’ trust in the long-term economic structure, the banks and the governmental hierarchy to deteriorate. Citizens of Latin American countries, in general, tend to align their country’s identity with who is leading, which gives the leader more power (Disney & Williams, 2014). Accordingly, Argentines tend to personify the government and hold the president accountable for many government-related issues. As a result, the Argentine presidents appear committed to presenting a more favorable image of themselves to the public and to curbing the media’s criticism of the government.

During Néstor Kirchner’s term as president (2003-2007), he constructed a new political philosophy known as Kirchnerism. As a candidate, he was mostly unknown by voters; however for those who did know him, he was considered to be Peronist, an identification that triggered familiarity and nostalgia (Montero & Vincent, 2013). Kirchner gained popularity among the citizenry as the “people’s man” and “has endeared himself to his countrymen by talking tough to the International Monetary Fund” (Langman, 2004, p. 1).
For most of his presidency, the government and Argentina’s largest media conglomerate, Grupo Clarín, had a good relationship. However, Néstor Kirchner’s wife, Christina Fernández de Kirchner, did not enjoy a positive relationship with Grupo Clarín. For example, in 2007, Clarín reported that a businessman flew in from Venezuela with $800,000 in cash, “prompting allegations that the money was meant as a secret contribution for Mrs. Kirchner’s presidential campaign” (Romero, 2012, para. 12). As a result of this story, whether true or not, Néstor Kirchner’s relationship with the media began to sour. Despite this tension, Néstor Kirchner successfully paved the way for his wife’s candidacy after his term ended in 2007; he died three years later in 2010.

President Fernández de Kirchner began her term as president in 2007 and adopted her husband’s established Kirchnerist policies. Despite previous concerns, she was the overwhelming favorite for reelection in 2011 (Moffett, 2007), winning 23 of Argentina’s 24 provinces as well as 51.4% of the popular vote—a feat Calvo and Murillo (2012) attributed to “the ideological appeal and remarkable durability of the Peronist brand in the country’s political system” (p. 1). However, in 2014 the polls indicate that she is strongly disliked by many Argentines. According to Management & Fit, an Argentine polling consultancy referenced in Reuters, The New York Times and The Wall Street Journal, Fernández de Kirchner’s national approval rating has fallen to 25% as of April 2014 (Bronstein, 2014).

Part of this disapproval is based in Fernández de Kirchner’s economic policy. For example, the President is known for nationalizing Yacimientos Petrolíferos Fiscales (YPF), a formerly private oil company (Schmall, 2012). This initiative brought much international criticism because, as an editorialist for The Washington Times put it, “Nationalization will not change the hard math: YPF cannot continue to sell below cost forever, nor can the Argentine government afford to fund the difference” (Ghei, 2012, para. 5). Not all applications of Fernández de Kirchner’s economic policy brought criticism, however. The president also nationalized the broadcast of soccer games on TV—a move that even most of her opponents supported because soccer is such a universal passion in Argentina (Forero, 2009).

Media in Argentina are typically divided by their political bias (e.g. conservative versus liberal); today many can be classified as either pro-Kirchner or anti-Kirchner. Major media outlets that favor the Kirchners are Tiempo Argentino, news organization Telam, TV Channel 7, and Radio Nacional (Argentina: Press, 2007) while media organizations that oppose and criticize Fernández de Kirchner’s presidency include media conglomerates Grupo Clarín and La Nación (Argentina politics, 2010). The latter two have published information that challenges the validity of the information released by the government, and have consequently been attacked and accused of lying by the government (“Argentina politics,” 2010).

For the purposes of this paper, I focus on four newspapers, each headquartered in Buenos Aires. The first newspaper, Clarín, was founded in 1945 by Grupo Clarín, the largest media conglomerate in Argentina and the “country’s most important media group, both in economic and political terms” (Platt, 2007, p. 16). An international watchdog association produced at the Missouri School of Journalism reported, “[Grupo] Clarín controls 60% of the cable market and 25% of the Internet market; it has ownership of 10 radio stations, six newspapers, a news agency and Argentina’s second most popular TV channel” (Peltier, 2013, para. 6). Grupo Clarín therefore represents a large portion of the media available to Argentines.

However, according to Peltier (2013), Grupo Clarín is also “considered one of the biggest critics of President Cristina Fernandez de Kirchner’s government” (para. 6). Grupo Clarín has been the focus of most of Kirchner’s alleged censorship, and its clash with the government began around the same time that Fernández de Kirchner assumed presidency. An incident that spawned criticism from Clarín occurred March 11, 2008, when Fernández de Kirchner raised farming export taxes (Sreeharsha & Barrionuevo, 2008). Grupo Clarín is also a principal organizer of Expoagro, the country’s largest annual agricultural fair, and it sided with the farmers on strike (Sreeharsha & Barrionuevo, 2008). As a result, relations between Grupo Clarín and the government weakened, and some claim that the government has actively harmed the company. Indeed, Grupo Clarín is in the process of breaking into six licensed groups of media outlets to be divided amongst shareholders or sold as a result of a law passed in 2009 restricting the concentration of media ownership, an event on which I elaborate later (“Argentina News,” 2014).

La Nación, founded in 1870, is the second
newspaper in this study, and it is also perceived as critical of the government. The government has accused owners of Clarín and its rival paper, La Nación, of working with the dictatorship to obtain Papel Prensa, the only newsprint manufacturer in Argentina (Rafsky, 2012b). Clarín and La Nación are both traditionally anti-Kirchner and have a similar audience. Editors from both papers have reported that they believe they are under attack by the Argentine government (Turner, 2013). The last two newspapers in this study, La Prensa and Página/12, tend to report the government in a more favorable light. It is important to note that the latter newspaper was criticized in 2004 by one of its writers for withholding the publication of articles about the impeachment of Néstor Kirchner’s chief of staff for corruption (Nudler, 2004).

Although President Cristina Fernández de Kirchner is not accused of exercising blatant censorship of the media like the military junta did, she is accused of controlling the media both explicitly and implicitly, beyond issues of national security. It is reported that topics of government corruption and conflicts of interest among journalists and government officials have lead to the majority of the press censorship, although violence may also play a role in media censorship (Karlekar, 2012). For example, supporters of Néstor Kirchner were accused of threatening and beating a journalist who wrote critically of a Santa Cruz taxation policy at the time when incoming President Néstor Kirchner was governor of Santa Cruz (“Argentina: Crisis,” 2003).

It follows that high levels of government corruption in Argentina would increase the government’s interest in manipulating the media. According to a 2013 study by nonprofit organization Transparency International, 72% of the 1,001 Argentines who were polled nationally via telephone said their government’s corruption had increased in the past year, making Argentina the Latin American nation with the fastest rise in corruption. It is suggested that corruption in Argentina worsened after 2002, when the Argentine Congress’ control increased to combat the economic crisis. These temporary measures gave the government more discretion in procuring government funds, appointing public officials and reallocating funds. These special privileges, however were never repealed as the crisis subsided.

The high level of perceived corruption would seem to increase the probability of media exposés, but the economic crisis of the early 2000s left many media outlets struggling and willing to accept help even if it “came with strings.” These “strings” include portraying the government in a more positive light (i.e. downplaying possible corruption) in exchange for revenue from public service announcements that the government seems to delegate with discretion (“Argentina: Crisis,” 2003). According to Turner (2013):

In recent years, President Cristina Fernández de Kirchner’s government has slashed state advertising in both newspapers [Clarín and La Nación] as it lavishes money on smaller rivals, radio and television stations that support her, according to court rulings and government data on ad spending” (para. 2).

Fernández de Kirchner allegedly targets smaller media outlets that cater to provincial areas because they are the most desperate to survive. “Without state advertising it is almost impossible to survive,” a radio host from the Santa Cruz province told Global Journalist in 2007 (“Argentina: Media,” 2007, para. 3). This practice whereby the government is “favouring sympathetic media with official advertising funds and withholding those funds from media regarded as critical” leads newspapers to compete among each other for government media spending (“Argentina: Government,” 2008, n. p.). Research conducted by the Committee to Protect Journalists has affirmed that the Argentine government manipulates the media in this way, violating Argentina’s constitution as well as the American Convention on Human Rights (“Supreme Court,” 2011). In an effort to balance out the distribution of government advertisements, the Argentine Supreme Court ruled in 2011 that the government must grant official advertisement to all media (“Supreme Court,” 2011).

It is suggested that the government also manipulates the media by controlling advertisement spending by outside sources. In February 2013, the commerce secretary ordered the companies that spend the most on newspaper advertising—supermarkets and electronics retailers—to stop placing ads in Clarín and La Nación (Turner, 2013). The retailers feared that if they did not comply, the government would limit their ability to import goods or perhaps would grant “spurious” tax evasion charges (Turner, 2013, para. 4). Consequently, ads placed by retailers in Clarín fell from 243 pages in March 2011 to five pages in March
2012, and retailer ads in La Nación fell respectively, from 109 to seven pages (Turner, 2013). This decrease in the placement of retailer ads may indicate the success of the government fear tactic.

In addition to manipulating advertising spending, the government has been accused of using verbal attacks against Clarín in particular. For example, in 2012, the aide of Guillermo Moreno, Argentina’s secretary of domestic commerce, was photographed distributing socks that read “Clarín Lies” to poor children in Africa (“Con Moreno,” 2012). In 2012, Fernandez de Kirchner also called a journalist for Clarín a “Nazi” (“Cristina Kirchner tildó,” 2012). The attacks against Clarín have allegedly come in the form of legislation as well. The Argentine Congress passed a media law in 2009 that limits the concentration of media ownership (Turner, 2012). The stated purpose of the law is to make ownership of the media more democratic (by preventing the existence of conglomerates), and Latin American governments commonly pursue such regulations in the interest of media plurality (Paz, Sgrò Ruata, & Guzmán, 2013). Critics, however, suggest that this law reflects Fernández de Kirchner’s attempt to topple Grupo Clarín (Turner, 2012). The law affects 20 other media companies but significantly harms Grupo Clarín, which President Fernández de Kirchner declared owned 73% of the audiovisual media (radio, television and cable) licenses in Argentina (Americas Quarterly, 2012). The managing editor of Clarín was quoted as follows by The Wall Street Journal, “The government’s goal is to reduce Clarín’s size and limit its reach” (Turner, 2012, para. 17). In December 2013, the 2009 law to dismantle Grupo Clarín was upheld after years in appeals courts, and the media conglomerate is dividing into six smaller media organizations (“Argentina News,” 2014).

Another example of legislation that affected Grupo Clarín occurred when Fernandez de Kirchner nationalized soccer coverage, taking away the exclusive broadcast rights from Grupo Clarín (Forero, 2009). This instance was well received by most, however, as it quadrupled the number of viewers from the previous season (Forero, 2009). A more drastic law passed in December 2011 lessened Clarín’s and La Nación’s control over newsprint and increased government control of the media, particularly of the printing press company Papel Prensa, the only printing press in Argentina (Rafsky, 2012b). The law raised productivity standards for the printing press, mandating that the government could increase its shares in the company if necessary, in order to achieve the increase. To implement the law, the government formed a commission that consisted of representatives from every Argentine newspaper except Clarín and La Nación (Rafsky, 2012a).

On a more general level, Fernández de Kirchner passed an anti-terrorism law in 2011 that increased punishment for the crime of “inciting collective violence” and “terrorizing the public.” Despite the clause specifying that the law should not interfere with citizens’ rights, the law was used against an Argentine journalist in December 2013 for the first time, affirming the media’s fears. Critics of this law suggest that the legislation is vague and uses undefined terms (“Newspaper,” 2014, para. 3). Journalist Juan Pablo Suárez was arrested in northern Argentina for filming a violent arrest during a protest and a provincial federal court charged him with violating the Anti-Terrorism Act. Although authorities raided Suarez’ newspaper offices and arrested him immediately following the video’s publication, the prosecutor claimed the arrest was because Suarez was “spreading false information” (Marty, 2014, para. 5).

The progression of measures against the media may suggest that the freedom of the press is deteriorating under Fernández de Kirchner. Evidence suggests that media suppression by the government did not start during her presidency, but rather continued from her husband’s presidency; Néstor Kirchner was accused of paying to manipulate the media (“Government pushes,” 2008). Nevertheless, Fernández de Kirchner is perceived by some to have increased her control over the press, thereby limiting press freedom. While Fernández de Kirchner is not using technical laws of prior restraint, critics posit that she is effectively achieving the same outcome. In other words, news outlet staff believe that they are unable to print information of which Fernández de Kirchner would not approve (“Argentina: Crisis,” 2003) because her government provides funding to and passes legislation in favor of media outlets that present a more favorable image of both her and the government (“Argentina: Government,” 2008).

In terms of Argentina’s economic stability, critics suggest that the President minimizes reported inflation rates. In other words, Argentina’s inflation rate has come to be a highly disputed figure by both internal and international organizations. For example, the Argentine government, through the Instituto Nacional de Estadística y Censos (INDEC), provides a much lower inflation rate from 2007 to 2014 than do outside
sources such as the U.S. Central Intelligence Agency World Factbook. The discrepancy is increasing each year, to the point where the annual national inflation rate for 2012 was 10.8% according to the INDEC and 25% according to Clarín, La Nación, and the MIT Billion Prices Project, an academic initiative that partners with PriceStats to conduct high frequency price research and determine accurate inflation rates.

The government has allegedly fined economists who publish inflation data different from that of the INDEC. Secretary of Domestic Commerce Guillermo Moreno was indicted on abuse of power charges in September 2013 for engaging in this practice (“Government stands,” 2013). Fernández de Kirchner, however, denies the discrepancy in inflation statistics. She noted that if inflation were truly 25%, as independent economists calculate, her country would “explode into the air” (H. C., 2014, para. 1). Nevertheless, Argentina was the first country to be officially censured by the International Monetary Fund (IMF) for misreporting financial statistics (H. C., 2014). In late February of 2014, the Argentine government implemented a supposedly corrected formula for determining statistics.

Hypothesis

It is possible that Fernandez de Kirchner’s government has acted in such a way that media bias has increased while accuracy has decreased. Thus, given their political bent, Página/12 and La Prensa would likely increase their positive bias towards Fernández de Kirchner during her presidency. In addition, the traditionally anti-Kirchner media sources, Clarín and La Nación, could either become positively biased toward the president in an act of compliance with the president’s alleged manipulation, or they could become more negatively biased due to a backlash, pushback effect that often accompanies cases of political polarization (Larrabure, 2013).

I hypothesize that the pro-Kirchner media have become more positively biased toward the president, and the anti-Kirchner media have become more negatively biased toward the president. I also hypothesize that inflation figure reports by all media outlets have become more inaccurate—that Página/12 and La Prensa report the inflation rate as lower than the real rate and that Clarín and La Nación report it as higher than the real rate. Thus, I generally hypothesize that the amount of bias and the degree of accuracy in the media have changed under Fernández de Kirchner’s presidency. My null hypothesis, therefore, is that the amount of bias and the degree of accuracy in the media have not changed under Fernández de Kirchner’s presidency.

Methodology

I support or refute my hypothesis by testing whether the print media have become more biased and in what direction, and by evaluating the accuracy of the inflation rate reported by the newspapers. I have chosen to review print media because it is known to be the most reliable and consistent; once an article is printed, information within it cannot be altered. Moreover, government-related problems are likely to be more pronounced in print media because of its watchdog role over the government; print media is referenced as the Fourth Estate, or fourth branch, of government in the system of checks and balances. I am also most familiar with print media because I earned a degree in the news/editorial sequence of journalism.

Bias occurs when media cast the ruling president in a positive or negative light, as opposed to a neutral light. Placement of stories within the newspapers also reflects bias; however I do not investigate this aspect because my evidence was gathered by viewing archives of articles online. I identify bias based on whether the author of the article editorializes and inserts opinion, whether he balances out sources that say good or bad things about the government, and depending upon the tone (e.g. pro- or anti-Kirchner, or neutral) with which he starts and ends the article (because frequently, the opening or closing reflects the desired theme of the article).

The timeline of this study is 2004–2013 because it establishes a baseline before Fernández de Kirchner’s presidency from which to evaluate change during her presidency. Fernández de Kirchner assumed presidency in December 2007. The timeline also includes a series of important events related to the relationships that media sources have with one another and with the government, as well as legislation and other methods of manipulation, as detailed in the previous section.

Some of the newspapers lacked search engines that could narrow the search to a specific topic, so instead I examined every newspaper issue from a certain day. In order to be consistent, I searched every third Wednesday of every fourth month (every January,
May, and September) to compare news articles. I chose this method because I considered three series of data (more than 2,000 articles) from each year to be enough to determine a trend in a newspaper. One limitation is that I was not able to analyze every article of every issue for each newspaper. By choosing Wednesday, I avoided weekends and most holidays, and I was more likely to get a more accurate assessment in case the beginning and ends of the month were more politically sensitive.

I examined one section from each newspaper from every issue I systematically chose, and I chose the section that had the most articles pertaining to domestic politics, so as to include articles about the president. For Página/12, I evaluated the “country” section. For La Nación, I evaluated all the articles with a “politics” label. The discrepancy in the number of articles in La Prensa is because the paper expanded its online archives dramatically in 2008. For Clarín, I evaluated the “country” section, although I did have to switch to the “politics” section when the archival format changed and the “country” section disappeared and became the “politics” section in 2012, before soon switching back. For La Nación, that section remained the “politics” section throughout the 10-year span.

I logged the newspapers, dates, article titles and my evaluation of bias in annexes (not included in this paper). When evaluating articles, I first determined whether the article topics were relevant to my investigation; I marked them as “relevant” or “irrelevant”. I determined they were relevant if they mentioned the president. When Néstor Kirchner served as president, I only deemed articles relevant if they talked about Néstor Kirchner. When Fernández de Kirchner was in power, from December 2007 on, I included former president Néstor Kirchner’s name only if the author used it to refer to traits or “kirchnerista” ideologies they both had. I included the terms “el/la presidente” (the president), “ejecutivo” (executive), “poder ejecutivo” (executive power) and the “la jefa/ el jefe del estado” (head of the country) and similar terms as direct references. I used discretion in cases of “estado” or “estado nacional” (the state), kirchnerista (ideology), “gobierno” (government), related terms, and actions of the ministers in the president’s Cabinet, who are appointed by the president and act in his/her capacity. I then formally identified neutral, positive or negative bias toward the president by the manners I previously mentioned. I also noted the proportion of relevant articles, as opposed to irrelevant articles, in case a sharp change affected the bias trends. For example, a pro-Kirchner paper could avoid telling bad news involving a president so that it simply reports on him/her less often.

One possible confounding variable in the analyses included the variation in the number of articles per issue, or the growth or shrinkage of the newspapers over time. I accounted for this by noting the proportion of relevant articles with neutral, positive or negative bias out of the total number of the articles in the section I evaluated. I entered that proportion into a chart and generated the graphs below to determine percent change in positive, neutral and negative bias over time in the newspapers.

In order to determine whether the accuracy of the information, and therefore the newspaper’s large-scale credibility, had changed, I searched for inflation figures reported by each newspaper. I compared these with the government-reported rates, which, since, 2007, have been significantly reported as lower than they actually were, according to the CIA World Factbook, the IMF and the World Bank. I determined that investigating reported inflation rates was the best test of accuracy because there are reliable third-party sources with private estimates with which to crosscheck the numbers: The World Factbook, the IMF and the MIT Billion Prices Project. The Argentine government reports a rate through the INDEC, el Instituto Nacional de Estadística y Censos (The National Institute of Statistics and Census); thus it would be easy to note which newspapers were relaying incorrect government information, and which were providing accurate information from outside sources. Also, the inflation rate is one of the most highly controversial statistics in the IMF and within Argentina itself.

One obstacle in this study was that the search engine for Página/12 did not have a date range option; as a result, I searched by topic and scrolled through all dates in chronological order. The others did have a date range option but the searched articles were not easily navigable. Also, I could not search La Prensa for articles before January 2006 because previous editions were not posted online. Fernández de Kirchner did not assume the presidency until December 2007; while this provides almost two years to establish a trend before her presidency, it does not fully coincide with my 2004-2013 timeline.

**Findings**
The evidence did not support my hypothesis that the print media had become more biased during the period of 2004–2014. Each paper turned out to have a different trend. I discuss the results for each of the papers separately.

**Página/12.** *Página/12*, known for casting the Kirchners in a positive light, tended to report about Néstor or Fernández de Kirchner less and less throughout the 10-year span. This could be attributed to Fernández de Kirchner’s falling popularity and a pattern of suspicious and luxurious spending, bribes, offending other countries, economic decline, and other problems that arose throughout the years. However, because *La Nación* is the only newspaper whereby the relevancy rate did not decline, I speculate that from 2004 to 2013, most newspapers tended to report less on the president and increasingly more on other leaders, issues, and events.

Between 2004 and 2013, the number of *Página/12* articles involving the president decreased from 50% to 20%. This means that the newspaper increasingly left the president out of the discussion regarding issues on which it reported. If the issues were similar from 2004 to 2013, then this would suggest bias by omission. For example, if a government corruption scandal broke, it is possible that *Página/12* still covered the issue just like the other newspapers, but that it avoided implicating the president in the scandal. If the positively biased papers reported on negative news without bringing the president’s name into the negative news, then this would be a type of positive bias for which my research did not account.

The proportion of neutral relevant articles in *Página/12* increased throughout the years from 38% to 83%. The number of negative articles increased only slightly, by 6%. The number of positive articles dropped more drastically, from 44% in 2004 to 10% in 2012. This was contrary to my hypothesis. I had expected the newspaper to cast the president in a more positive than negative light, which it did by a margin of 40% in 2004. However, I did not expect the negative bias to increase,
albeit slightly, nor did I predict that the positive bias would decrease over time but expected it to increase substantially. However, because the newspaper wrote about the president less, the omission could factor into these results. Further research needs to be conducted to delve deeper into manifestations of bias in the newsprint media.

**La Prensa.** According to Figure 3, La Prensa, the other traditionally positively biased newspaper, experienced an almost identical drop in the number of relevant articles, from 58% in 2004 to 29% in 2013 (29% as opposed to Página/12’s 30% decrease). Similarly, this suggests bias by omission may have occurred.

According to Figure 4, La Prensa, experienced less change in bias than Página/12. The number of positively biased articles stayed the same while the number of neutral articles decreased slightly, by 7%, and the number of negative articles increased by 23%. *La Prensa* is the only newspaper in which no trends were significant enough to merit intersecting lines.

**Clarín.** Transitioning into the traditionally anti-Kirchner newspapers, Clarín and *La Nación* had a less drastic drop in relevance of articles (please see Figure 5). Clarín experienced a 14% decrease, as opposed to approximately 30% for Página/12 and *La Prensa*, in terms of relevance. This suggests less bias by omission, although a traditionally negatively biased article could potentially leave the president’s name out of good news and thus result in bias in the opposite way.

According to Figure 6, Clarín had a unique correlation between neutral and negative articles. The proportion of negative articles rose to surpass that of neutral articles, which were falling simultaneously. The number of positive articles decreased. Clarín is the only newspaper that supports my hypothesis because its bias grew less positive and neutral and more negative over the years. This finding was not surprising given the recent federal legislation to dismantle Clarín and the fight between Grupo Clarín and Fernández de Kirchner.

**La Nación.** According to Figure 7, *La Nación* consistently had the same number of relevant articles per issue. This suggests a lack of change in bias, so in other words, neutrality.

According to Figure 8, *La Nación*, on the other
hand, showed a large drop in negative articles from 53% in 2004 to 27% in 2013. Positive articles decreased by only 3%, and neutral articles increased by 32%. These findings, combined with the flat trend line of relevant articles, indicate that La Nación, in terms of change in bias, is the least affected of the four newspapers in terms of Fernández de Kirchner’s alleged methods of control.

Discussion and Limitations

I speculate there may be a small margin of error in my bias detection because my understanding of the Argentine political system increased over time. Therefore, perhaps I became better able to identify bias over time. If I were to conduct further research, I would blindly evaluate the same articles again and see how consistently I determined neutral, positive, or negative bias.

I expected to find an increase in positive bias and a decrease in negative bias among the traditionally pro-Kirchner papers, Página/12 and La Prensa; however, my findings did not support my hypothesis. I also hypothesized that both Clarín and La Nación would have fewer positive articles and more negative articles. I expected Fernández de Kirchner’s alleged attempts to control the media would cause the pro-Kirchner papers to publish more positively biased articles toward the government and fewer negative articles. I then expected a polarization, or push-back effect, but this did not occur either. The evidence is more consistent with the view that the editors of La Nación were trying to become a credible, neutral paper that citizens could turn to for accurate information instead of offering more polarized articles.

To determine accuracy in the reported inflation rates, I recorded the sources of the inflation figures that each paper reported. I hypothesized that the traditionally pro-Kirchner papers would publish the lower inflation figures that corresponded with the official INDEC calculations rather than with the higher private estimates. I hypothesized that they would identify that a discrepancy existed, but still publish the government’s numbers as credible. I expected that the traditionally anti-Kirchner papers would publish figures closer to that of the government’s INDEC rate, and if so, only to show the discrepancy between that rate and a much higher rate they would claim to be the credible one.

It turns out, the data were more difficult to analyze than I had predicted. For instance, it was difficult to find credible sources with which to compare because the Argentine inflation rate is so controversial. For example, the World Bank did not have inflation numbers for 2008 through 2013. The IMF had dashes in the boxes for recent inflation rate statistics for Argentina, noting that the government rates are not credible. In addition, the CIA World Factbook explicitly stated that the official estimates were underreported and inaccurate.

In terms of inferring trends in the accuracy of the newspapers’ reporting, most often the papers specified whether they were simply relaying the government’s INDEC information or using private estimates. So the assertions they made were accurate almost 100% of the time because of the source to which they attributed it.

I kept a chart of the numbers each paper listed for each year, to compare with independent estimates, however in most instances, the newspaper listed multiple figures from different sources. So even if I were to infer bias by how many times a newspaper cited a certain source, there was no definitive way to accurately find and record every instance that an annual inflation rate was mentioned. In addition, not all the papers I reviewed had search engines with the option to filter by date.

Moreover, the CIA World Factbook, the IMF, and the MIT Billion Prices Project either did not release inflation figures for Argentina during certain years between 2004 and 2013 or the figures varied among the sources. For example, in 2008, the World Factbook reported an official rate of 7.2 and an unofficial rate of 22%, the IMF did not report a figure, and the MIT project reported 23.5%.

Because of the inability to include every article that mentioned inflation rates in the four newspapers, and because of the discrepancy in the reports of the inflation rate by reliable third-party sources, the study of the newspaper reports of the annual inflation rate was inconclusive. I could not determine whether the newspapers had become more or less accurate and could not establish a correlation between accuracy and the increasing influence of Cristina Fernández de Kirchner on the media.

Conclusion

I hypothesized that media bias would increase in Argentinean print media during the presidency of
Fernández de Kirchner because of her government’s ability to penalize media that publish unfavorable news. I measured bias in four Buenos Aires newspapers, but found that the bias increased in just one of the four papers. Inflation rate evidence to measure media accuracy was inconclusive. Consequently, the evidence fails to support my hypothesis.

Further research on media bias in Argentina is needed. In addition to this study, published articles about censorship in Argentina have focused on the relationship between Grupo Clarín and the government. What is needed are studies that focus on specific issues, such as the aforementioned smuggling of money into Argentina, allegedly for Fernández de Kirchner’s campaign. Coverage of such issues by each of the four papers should be studied in detail. This approach will allow researchers to better determine if a newspaper is omitting one side of an issue, including more sources that support one view, selecting stories that coincide with a pro- or anti-Kirchner agenda (for example, labeling political figures in ways that affect their credibility), and/or ‘spinning’ stories to only show one interpretation. Researchers can count the instances in which a newspaper publishes stories about a single event.

Another dimension that needs analysis in determining bias is placement of stories within the newspapers. Again, because I used online archives I was unable to examine which stories made the front page, had the biggest type and pictures, and so on. Even if two newspapers published similar articles, if one emphasized the articles that cast the president in a negative light by putting them on the front page in bold and the other placed them in the back and put a positively biased story on the front page instead, then this would be a clearer indication of bias.

Future researchers can also examine the hard copy of the newspaper to count the number of government ads placed in the paper. As a result, they could determine whether there is a correlation between the number of ads and the number of positive articles about the government. This issue is extremely relevant given the verbal warning from the government in 2013 whereby supermarkets were told to stop publishing ads in critical newspapers (Turner, 2013).

Despite the inconclusive results of this study, Latin America as a whole seems to be trending toward restricting the media (Karkekar, 2012). According to Americas Quarterly, “Freedom of speech remains a contested right in most democracies across the Americas” (Rodríguez, 2013, para. 1). Part of this is because there is fairly high public support in these countries for censoring politically damaging news. Colombia, Ecuador, and El Salvador take the lead of American countries with nearly 37% public support for the government censorship of politically damaging news, according to 2012 data (Rodríguez, 2013). Argentina, however, ranks second lowest, with a public approval rate just 3.5% higher than that of the U.S. (Rodríguez, 2013). This statistic provides some hope that Argentina can reverse any adverse effects from manipulation of the media under the Fernández de Kirchner regime.

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Introduction

Proceeding the beginning of the recent financial crisis, large central banks like those in Japan and the U.S. resorted to implementing non-traditional macro-policies like quantitative easing and credit easing in an attempt to jumpstart underperforming domestic markets. However, these policies are currently understudied; it is important to assess them since they could have the effect of depreciating a country’s domestic currency relative to others due to the deliberate depression of market interest rates in countries employing these policies. The cases of Japan and the U.S. were used to develop an empirical study seeking to determine any possible interactions these policies may have on currency markets.

A structured empirical analysis, split into two hypotheses to analyze the relationship recognized above was developed. The first hypotheses sought to identify if a relationship even existed between Bank of Japan (BoJ) and Federal Reserve (FED) operations and exchange rates. The second sought to define a particular mathematical relationship, for the purpose of identifying how these operations interacted with exchange rates.

Using balance sheet data and various other data measures, structured statistical models in SmartPLS were formed based upon the CIP (covered interest parity condition) economic theory. Then, the PLS algorithm of SmartPLS was applied, using two different, two week running windows, to these structured statistical models. This modeling process analyzed the movements of these central banks’ balance sheets to determine if there was matching variation in the exchange rate between the dollar and the yen over time. A strong and contiguous relationship was found. Next, the SmartPLS bootstrap algorithm was applied to these same structured models but with different time delineations based on significant FED quantitative easing (QE) dates. The bootstrap algorithm failed to define a significant, linear relationship between balance sheet holdings and exchange rates. Further research should be directed into defining the particular method in which movements in the balance sheet holdings of central banks affect exchange rates.

Theoretical Framework

In this section, the theoretical framework for this research study is described. It includes how a general economic model was constructed using the CIP to theoretically connect balance sheet holdings of the FED and BoJ with the dollar/yen exchange rate; this model was adapted to the SmartPLS program for subsequent statistical analysis. It will also be explained how co-linearity was systematically controlled.
The CIP is the derivation of this paper’s economic, empirical model. In addition, it is the base upon which this work’s statistical model garners its real-world association. The CIP was chosen for its ability to serve as a simple approach for hypothesizing economic causal relationships from one domestic market for a currency to another and for its strong ability to predict long-term fluctuations in exchange rates given highly contiguous and frequent data (Taylor, 1987). The CIP served as the essential theoretical framework for drawing relationships between central bank balance sheet movements and exchange rates for this paper. Nevertheless, in order to insure the validity of this model and its ability to compose a theoretical relationship between balance sheet holdings and exchange rates, a model containing all endogenous and exogenous variables theoretically relevant to the question of currency exchange rates, domestic security yields of Japan and the United States, and each country’s monetary programs was constructed in order to systematically confiscate, manipulate, add, or alter particular variables or sets for the purpose of ensuring statistical and economic validity.

Referring to Figure 1, a composition of five security yields were collected that represent available security classes in both countries as well as being security classes somewhat differentiable from each other. This composition of securities from each country were to represent the domestic nominal interest rates of the U.S. and Japan as defined in the CIP equation as $i_S$ and $i_Y$:

$$i_S = \left( \frac{1 + i_S}{1 + i_Y} \right) \times E_x^i = F_r^S$$

Next, the central bank was introduced as an independent actor endogenous to the model. Changes in balance sheet holdings of securities relevant to the central bank’s particular monetary programs defined its role in the model as a demander and/or supplier of loanable funds. These changes in balance sheet holdings are a direct consequence of demand and supply of loanable funds by the central banks into the financial markets for those securities. Other suppliers and demanders of these securities define exogenous variables and are not of interest to this research. Because the other participants in these financial markets have explicit effects on security yields, it was the purpose of this model to measure the specific efficacy of the central bank’s balance sheet holdings changes on security yields using the SmartPLS structured statistical algorithms.

The basic shape of the final CIP model is symmetrical, in that, the indicators and structural shape of the U.S. side of the model is identical to the Japan side, while both coalesce into a CIP defined exchange rate. This does not include the individual latent indicators as part of the various data sets employed by this paper; these indicators differentiate themselves with respect to each country depending on each central bank’s class of securities held over time. In the final model, this exchange rate does not represent the strict mathematical current exchange rate represented in the CIP, but the future observed rate (i.e. the future exchange rate relative to the measured date of the nominal interest rate and the balance sheet holdings of the BoJ and FED).

This research used the SmartPLS program’s modeling interface and various statistical literature to derive the statistical structure of the final model (i.e. the mathematically derived structure). The basic economic model based on the CIP was adapted to the type of path structuring governed by the SmartPLS software. Figure 1 represents a basic interpretation of this statistical method, Figure 2 is an actual screenshot example of the type of model employed in SmartPLS. One such adjustment made to the economic model to import it into SmartPLS was to exclude other suppliers and demanders of loanable funds from the statistical model as exogenous to this research’s objective. The particular statistical method employed by this paper theoretically justifies the exclusion of these other actors.

Furthermore, in Figure 1, lambda ($\lambda$) denotes representations of factor loadings for individual security yields. For the example in Figure 1, the formula of the security yield construct represents linear combinations
of these factors. $\lambda$ is the specific variance of each latent variable (security yield in this case) extracted that is then used as a factor in a linear combination that defines the theoretical path between the exchange rate construct and the given currency denominated security yield construct. Holistically, you can think of the formula in Figure 1 as a pseudo-weighted average of a given country’s domestic currency denominated security yields for a given point in time. This method of defining the CIP within a statistical framework about interest rates of a given country holds up empirically on average (Thornton, 1989).

This weighted average can represent the domestic nominal interest rate of the respective country. From the set of factor loadings, SmartPLS can derive multiple quality criteria such as AVE, cronbach’s alpha, and composite reliability. These criteria can assess the likelihood that the set of individual latent variables
should be a representative part of a particular construct. In practice, thresholds for structured models in PLC were Factor Loading > 0.63 [very good] (Tabachnick & Fidell, 2007), AVE > 0.5, Composite Reliability > 0.7, and Cronbach’s Alpha > 0.7 (John, 2002). An outcome below a defined threshold for these quality criteria would warrant the removal of low factor load scoring latent variables. This concept was very important as it helped to shape the inclusion or exclusion of particular variables during set periods throughout the multiple statistical sets administered in the SmartPLS program. To elaborate, given a particular measurement within a dataset of a certain period, not all data collected for the asserted statistical model would be relevant for that period. For example, the BoJ did not hold significant positions in commercial paper until 1/22/2009. Because of this, factor loadings for that variable up until that time would result in 0.000. This would warrant the indicator’s removal from the model up until 1/22/2009.

The SmartPLS program was also important for deeming the dates at which the CIP formula was most empirically viable. In order to adjust for the CIP’s inability to predict short-term exchange rate fluctuations, this research placed lags between all model constructs, both between central bank balance sheet holding measurements and security yield measurements, and between security yield measurements and exchange rate measurements. The lags essentially allow a significant amount of time for investors to hedge or cover their positions so that the economic model of this research is not working within the theoretical model of the Uncovered Interest Parity Condition (UIP), which itself does not hold up to empirical verification (Chaboud & Wright, 2004). The CIP does hold during such lags as long as high frequency, high-quality data are used (Taylor, 1987). This paper used lags of 120 days, 90 days, and 30 days placed between particular data nodes in certain data sets. Table 1 outlines which particular data sets employed by this research used which lags. These lags were determined through a series of
statistical analyses in SmartPLS using small subsets of data from 11/25/2008 (beginning of QE 1 program) and ending 5/15/2013 (Federal Reserve Bank of St. Louis, 2013). The next section will elaborate on how the general statistical model, economically justified by the CIP, was methodologically developed into the final analysis. It is broken up into two sub-sections, one defining the method in which this structural model was employed by the first hypothesis of this paper, which utilized the PLS algorithm, and then by the second hypothesis, which utilized the bootstrap algorithm.

**Hypothesis 1 Methodology: Partial Least Squares Structural Equation Modeling**

Two models were used for evaluating the existence of a relationship between balance sheet holdings of the FED and the BoJ and the dollar/yen spot rate. Referring to Table 1, these are models A and B. Model A utilizes lags placed between data nodes in order to reduce the potential effects of autocorrelation (30 days from balance sheet measurement date to security yield date and 90 days from security yield date to spot rate). Model B utilizes an alternate set of lags for the purpose of comparison to insure that the statistically derived lags for model A in fact hold up empirically (30 days from balance sheet measurement date to security yield date and 30 days from security yield date to spot rate). If the computed lag dates are indeed optimum then Model B’s results should approximately represent the tail end of a normal curve that represents the variance accountancy of balance sheet holdings with respect to changes in date lags. Model A’s relationship parameters, on the other hand, should exist near the 50th percentile of the distribution, or the mean. Refer to Table 1 for the exact dates of lags utilized in both models.

Both models A and B are 2-week running windows starting 6/23/2009. However, each uses measurements taken earlier due to the 120 lag placed on the balance sheet holding measurements and 90 day lag placed on the security yield measurements (Balance sheet holding and security yield measurements started 11/25/2008). Both models contain 102 distinct datasets. Each dataset contains a total of 120 days of measurements for each indicator discussed earlier. Each dataset was computed using an identically structured model to Figure 2 albeit with indicators of differing measurement dates (refer to Figure 3 for the general outline of the models used in these two models). Each data set contained a series of three computations for the purpose of reducing co-linearity. Figures 3, 4, and 5 are the general mathematical models of which these three computations were computed. Each figure corresponds to one unique computation.

Figure 3 is a non-manipulated mathematical representation of the CIP defined economic framework.
Figures 4 and 5 are manipulated models that were used to compute individual correlations between each central bank’s balance sheet holdings and the dollar yen exchange rate. Referring to Equation 1, these manipulations are done for evaluating individual cases where the sum of the individual simplified, manipulated cases were greater than, or less than or equal to the congregated, non-manipulated model. There were a total of two cases that required adjustment, utilizing the aforementioned equation and figures, in order to adjust for co-linearity among nodes in the statistical model.

In one case, Case 2, the sum of the two central banks’ balance sheet holdings’ correlation coefficient with the spot rate was greater than when the two central bank’s balance sheets were both factored into the model at the same time (e.g. Figure 3). In another case, Case 1, the sum of these correlation coefficients are less than those in Figure 3. Co-linearity between interest rate nodes and the spot rate can possibly explain Case 2; this can happen when one construct depends on two or more other constructs. A lack of prediction power in the model where correlation coefficients are exceedingly low can possibly explain Case 1.

Equation 1 presents these two cases. It also describes how this research mathematically adjusted for each. Equation 1 denotes these two cases, Case 1 and Case 2. Equation 1’s various variables are directly related to those in Figures 3, 4, and 5. In both cases 1 and 2, the correlation coefficient of the relationship between the central bank’s balance sheet holdings construct with the interest rate construct was multiplied with the correlation coefficient of the relationship between the interest rate construct and the spot rate construct. However, in Case 2, extra steps were taken to adjust for possible co-linearity introduced into the model as was described with Case 2.

Equation 1. The set of computations that adjusted for possible co-linearity introduced by the structured statistical model when using the PLS algorithm in SmartPLS:

\[
\begin{align*}
\beta_{1,1} &= \text{Adjusted FED Correlation with } E$/¥ \\
\beta_{1,2} &= \text{Adjusted BOJ Correlation with } E$/¥ \\
H_0: &\beta_{1,1} = \beta_{1,2} = 0 \\
H_1: &\beta_{1,1} > 0 \text{ AND } \beta_{1,2} > 0
\end{align*}
\]
In order to reduce this co-linearity, Models A and B employed a set of computations to mathematically count two extreme outcomes of the structured statistical model accountancy of balance sheet holdings correlation with dollar/yen exchange rate variation over time. For example in one instance, the BoJ’s balance sheet holdings \( r^2 \) with the spot rate node was held constant and the FED’s balance sheet holdings \( r^2 \) with the spot rate were assumed to accommodate all co-linearity. The difference in the sum of these two correlation coefficients in Figures 4 and 5 and the correlation coefficient in Figure 3 from the correlation coefficient computed for the FED in Figure 5. In other words, this counting computation biased the correlation coefficient of the spot rate in Figure 3 \( r_{3,2} \) to favor the BoJ’s balance sheet holdings variance. Likewise, a similar computation favored correlation coefficient \( r_{3,2} \) with that of the FED’s balance sheet holdings variance. Equation 1 represents these biases as a set matrix denoted A.

After counting these two extreme cases, the model computed a pseudo-weighted average, weighted based on the percent degree at which one central bank’s correlation coefficient, in both bias cases, encompassed the combined correlation coefficient measurement of the two bias cases;

\[
\left( \frac{\sum_{j=1}^{2} \alpha_{2,j}}{\sum_{i,j=1}^{2} \alpha_{i,j}} \right) : \text{Example for FED from Equation 1].}
\]

The model then scaled the average of the individual bank’s correlation coefficients

\[
\left( \frac{\sum_{j=1}^{2} \alpha_{2,j}}{2} \right) : \text{Example for FED from Equation 1].}
\]

The point of this was to congregate the set A in Equation 1 into two easy to compare correlation coefficients that adjust based on the degree that one central bank’s programs overpowered the other’s. In the case that the two program’s individual correlation coefficients were similar, the pseudo-weighted average would merely serve the purpose of congregateing the set A.

The model used a set of hypotheses to evaluate these two cases. The bottom of Equation 1 lists these hypotheses. \( H_0 \) represents the null hypothesis and \( H_1 \) represents the alternate hypothesis. These hypotheses mainly serve the purpose of evaluating the equation set of Equation 1 and not necessarily for evaluating the question as to whether there exists a relationship between balance sheet holding movements and exchange rates as is the purpose of this model. Nevertheless, the hypotheses presented in Equation 1 and the PLS algorithm in SmartPLS, combined, provide the framework and evidence for which to subsequently evaluate the possibility of any relationship existing between balance sheet holdings and exchange rates.

**Hypothesis 2 Methodology: Bootstrap Structural Equation Modeling**

The bootstrap approach primarily assessed specific hypotheses regarding the mathematical structure of changes in central bank balance sheet movements with changes in exchange rates. This approach is an expansion of the PLS running window analyses and was utilized for its power to estimate the mean effects of changes in balance sheet holdings on exchange rates. A set of hypothesis are defined and are used to guide the reader into the methodology of this empirical section of this paper. These hypotheses denote the purpose of this section of this paper, which is to develop an empirical derivative of the data used in the PLS empirical study that can define a mathematical relationship between balance sheet holdings of central banks and exchange rates.

Referring to Table 1, models C and D utilize the bootstrap statistical method. These models used identical economic models to those employed in models A and B. Intuitively, these models employed similarly structured statistical models. The length of lags between the constructs that exist in these models are identical to those of Model A’s. However, these models utilized same data but delineated by different dates.

The bootstrap method was applied to a modified data set composed of differing date delineations compared to the PLS analysis models. One set corresponds to the entire period of non-traditional monetary policy analyzed by this research (11/25/2008 to 5/15/2013), and one corresponding to dates delineated by the beginnings and endings of non-traditional monetary policies of the FED. Table 2 outlines these dates.

Equation 2 outlines the bootstrap algorithm in conjunction with the variables presented in Figure 6. Figure 6 is a simplified mathematical model of the actual one used in SmartPLS. For each data set, this paper utilized the SmartPLS bootstrap algorithm to compute 999 resamples of each data set; not including...
the one original sample. Furthermore, for the ‘case’ parameter in each data set, this paper used numbers of cases equal to the number of days in each data set, e.g. the number of unique measurements for a particular indicator over the data set’s period.

Equation 2. Bootstrap algorithm and accompanying hypotheses:

\[ i = \text{sample #} \]
\[ \sigma = \text{standardized regression weight} \]
\[ X = \text{the set of resampled standardized measured effects} \]

\[ o_1 = y_{1,i} \times y_{1,1} \Rightarrow \text{BOJ measured effect} \]
\[ x_{1,i} = \left[ y_{1,i} \right] \times \left[ y_{1,1} \right] \]
\[ \left[v_{1,1}\right] \in Y_{1,1} = \left\{ \left[v_{1,1} \right], \left[v_{1,2} \right], \ldots, \left[v_{1,n} \right] \right\} \Rightarrow \text{BOJ (} \sigma = 1 \text{)} \rightarrow \text{ES/} \text{EUR} (\sigma) \]
\[ \left[v_{1,i}\right] \in Y_{1,i} = \left\{ \left[v_{1,1} \right], \left[v_{1,2} \right], \ldots, \left[v_{1,n} \right] \right\} \Rightarrow \text{BOJ (} \sigma = 1 \text{)} \rightarrow \text{ES/} \text{EUR} (\sigma) \]
\[ x_{1,i} \in X_{1} = \left\{ x_{1,1}, x_{1,2}, \ldots, x_{1,i} \right\} \]

\[ o_2 = y_{2,i} \times y_{2,1} \Rightarrow \text{FED measured effect} \]
\[ x_{2,i} = \left[ y_{2,i} \right] \times \left[ y_{2,1} \right] \]
\[ \left[v_{2,1}\right] \in Y_{2,1} = \left\{ \left[v_{2,1} \right], \left[v_{2,2} \right], \ldots, \left[v_{2,n} \right] \right\} \Rightarrow \text{FED (} \sigma = 1 \text{)} \rightarrow \text{EUR/} \text{USD} (\sigma) \]
\[ \left[v_{2,i}\right] \in Y_{2,i} = \left\{ \left[v_{2,1} \right], \left[v_{2,2} \right], \ldots, \left[v_{2,n} \right] \right\} \Rightarrow \text{FED (} \sigma = 1 \text{)} \rightarrow \text{EUR/} \text{USD} (\sigma) \]
\[ x_{2,i} \in X_{2} = \left\{ x_{2,1}, x_{2,2}, \ldots, x_{2,i} \right\} \]

\[ \text{BOJ} = 1 \mid X = \left\{ x_{1,1}, x_{1,2}, \ldots, x_{1,i} \right\} \]
\[ \text{FED} = 2 \mid X = \left\{ x_{2,1}, x_{2,2}, \ldots, x_{2,i} \right\} \]

BoJ Estimated Mean Standardized Measured Effect of the Pop. \[ \Rightarrow \frac{\sum_{i}^{n} x_{1,i}}{n} = \mu_1 \mid n = \# \text{ of samples} \]

FED Estimated Mean Standardized Measured Effect of the Pop. \[ \Rightarrow \frac{\sum_{i}^{n} x_{2,i}}{n} = \mu_2 \mid n = \# \text{ of samples} \]

\[ H_0: \mu_1 \geq 0 \land \mu_2 \leq 0 \]

Given both bank balance sheet holdings increasing with respect to time

\[ H_1 (\text{depreciation/} \text{EUR}): \mu_1 > 0 \land \mu_2 > 0 \]
\[ H_2 (\text{depreciation/} \text{USD}): \mu_1 > 0 \land \mu_2 < 0 \]

Equation 2 proposes a number of hypotheses, one null and two alternatives based on the assumption that balance sheet holdings are increasing on average for both the FED and BoJ. (See Graphs 1 and 2 for evidence that over the period 11/25/2008 to 5/15/2013 balance sheet holdings for both banks are increasing on average.) \( H_0 \) (Null Hypothesis) defines an outcome of the bootstrap model that is counterintuitive to the way foreign exchange markets operate. The null hypothesis describes an outcome where the dollar/yen exchange rate is simultaneously appreciating and depreciating, assuming the balance sheet holdings of both central banks are increasing. The logical equation \( \mu_1 \geq 0 \land \mu_2 \leq 0 \) defines the null hypothesis; where \( \mu_1 \) is the mean, estimate of the standardized regression weights (SRW), or total effect, between the BoJ’s balance sheet holdings and the dollar/yen spot rate and \( \mu_2 \) is that of the FED’s. Simultaneous appreciation and depreciation in the spot rate is counterintuitive to the CIP and any such outcome would constitute some statistical discrepancy or failure in the model’s design. \( H_1 \) on the other hand refers to an outcome in which the dollar is depreciating with
respect to the yen. In this case, both mean, estimated population SRWs are positive. In the case of the second alternative hypotheses, $H_2$, both mean, estimated population SRWs are negative. This case implies that the dollar is appreciating against the yen.

In the case that balance sheet holdings of the FED and BoJ, if both are not increasing simultaneously, this research will conduct further analysis to extrapolate from the initial hypotheses postulated. There indeed exist specific cases through the time periods 7/28/2008 to 5/15/2013 that balance sheets of either bank are decreasing (Refer to Graphs 1 and 2).

**Data**

This work utilized Indicator data from 7/28/2008 to 5/15/2013, 120 days before the beginning of QE 1 operations: 11/25/2008 (Federal Reserve Bank of St. Louis, 2013). For general indicator data like exchange rates, this researched pulled data from the Trading Economics database (2013). The 3-month CD rate, 3-month LIBOR rate, and 3-month interbank rate for the

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**Graph 1.** On average, the FED increased its holdings of assets over the period 9/12/2007 to 5/15/2013 as indicated by the linear trend line. However, the rate of increase in these holdings started to diminish around 9/1/2010 as indicated by the inflexion point of the second-degree polynomial trend line.

**Graph 2.** From 9/15/2007 to 5/15/2013, on average, the BOJ increased it holdings of assets over time. However, from around 9/15/2007 to 3/1/2009, referencing the second-degree polynomial trend line, the BOJ was decreasing their holdings of assets. After around 3/1/2009, the value in the BOJ’s assets started to increase at an increasing rate.
U.S. and Japan were retrieved from the Federal Reserve Economic Database (FRED) (2013). The balance sheet holdings of mortgage backed securities (MBS), and U.S. note/bond treasury securities were also retrieved from the FRED database. Data regarding BoJ holdings of 1 year and 30 year Japanese government bonds, commercial papers, corporate bonds, stocks, exchange traded funds (ETF), and Japan real estate investment trusts (J-REIT) held as trust property were retrieved from the Bank of Japan Time-Series Data Search database (2013). U.S. 1 year and 30 year treasury security yields originate from the U.S. Department of the Treasury Resource Center (2013). 1 year and 30 year Japanese government bond yield data were retrieved from the Ministry of Finance Japan’s Japanese Government Bonds Data Interest Rate database (2013).

All indicators were aggregated frequency wise into one-day increments. This research accounted for missing data or data of different frequencies by the substituting the earliest available measurement for that indicator given a particular date in time.

This research parsed data by pre-determined dates and lags according to the defined models in Table 1 and saved them into comma-delineated sheets (.csv) for importation into SmartPLS. The data were then assigned to constructed models like that of Figure 2.

Results and Discussion

The following section describes the results from the four models derived from the previous sections. Each model delineates a section below and are in alphabetical order by the model identifier. Table 1 summarizes the models employed by this research.

Model A PLS 2 Week Running Window

Referring to Graph 3, all 102 PLS algorithm computations for both the FED and the BOJ from Project A have been inputted as stacked clustered columns. The yellow-clustered columns represent the FED’s balance sheet holdings of MBS and notes/bonds percent correlation with the variance in the dollar/yen exchange rate. The BoJ’s balance sheet holdings of 1 year Japan bills, 30 year Japan bonds, corporate bonds, commercial paper, ETFs, J-REITS, and stocks percent correlation with the variance in the dollar/yen exchange rate are filled as black and stacked on
top of that of the FED’s. The stacking is appropriate because the combined variance accountancy of both banks is intuitively a single output from the SmartPLS program. A measure for each bank exists because of the measures taken to reduce multi co-linearity. The stacking also provides a convenient aid in evaluating the potency of each of these central bank’s programs about the exchange rate. It is important to keep in mind that the measured correlations drawn on the graph refer to balance sheet holdings 120 days before the measurement of the dollar/yen exchange rate, also drawn on the graph in green.

The purple and blue shaded regions in the background of the graph represent the level of the FED’s (purple shade) and BoJ’s (blue shade) monetary programs, as measured by the dollar value of their assets at the 120-day lag corresponding to the date axis. The lag in the balance sheet holdings measurement is consistent with the PLS statistical model’s 120-day lag and the clustered column’s 120-day lag. This project standardized the balance sheet holdings of each bank over the period starting 9/19/2007 and ending 5/15/2013. On the graph, the FED’s shaded area ascends the plotted area as its balance sheet expands and vice versa, while the BoJ’s shaded area has been inverted so that its area descends the balance sheet holdings expand, overlapping any FED actions. The purpose of the inversion was to stay consistent with the CIP theory of inverted effects of two countries’ currency denominated yields when compared in conjunction with the current exchange rate between those two countries. Furthermore, the graph has drawn the standardized dollar/yen exchange rate as the green line traversing the length of the graph. The date of the dollar/yen exchange rate measurement corresponds to the exact date on the date axis; this is consistent with the statistical model where the exchange rate is a zero day measurement. In addition, exchange rate was standardized over the period starting 8/27/2008 and ending 5/15/2013.

Blue and purple lines populating the upper height of the graph delineate dates of non-traditional monetary program introductions or expansions 120 days before the measure on the date axis, consistent with the stacked columns and shaded areas. The blue lines represent BOJ program introductions or expansions while the purple lines represent FED program introductions or expansions.

It is apparent in Graph 3 that there is a powerful relationship between changes in balance sheet holdings of either the BoJ or FED and the dollar/yen exchange rate. Increases in the shaded areas correspond to a sharp rise in the exchange rate over the length of the graph. This relationship is even powerful in the short run where volatility in balance sheet holdings is consistent with volatility in the exchange rate. This relationship is solidified by the stark rises in the variance accountancy of the exchange rate by balance sheet holdings during abrupt changes in the exchange rate.

**Model B PLS 2 Week Running Window**

As a means of making sure the lags introduced into the statistical model in project A are appropriate, another PLS analysis was conducted using shorter lag dates. If consistent with this research’s initial CIP lag tests, the results of the shorter lag dates should cause the correlations among the balance sheet holdings and the spot rate to diminish or not significantly change due to actors on exchange rates not having enough time to cover their positions.

Referring to Graph 4, the patterns in the correlations among the FED and BoJ balance sheet holdings and the dollar/yen spot rate appear to be similar to that of Project A’s. The oscillation patterns in the correlations among the balance sheet holdings and the exchange rate exists among roughly the same periods in both graphs. Furthermore, in Graph 3, relative to Graph 1, the magnitudes of the humps are roughly the same around the 1/23/2010, 8/23/2010, and 3/23/2011 date markers. Furthermore, there is a significant decrease in the magnitudes of the humps around the 10/23/2011 and 5/23/2012 date markers. Interestingly, the magnitude of the correlation stacks around the 12/23/2012 date marker increased significantly.

It is apparent that Model A provides significant evidence for a relationship between BOJ and FED balance sheet holding changes and the dollar/yen exchange rate.

**Model C Total Time Bootstrap Analysis**

Project C utilized the bootstrap analysis method. This analysis further evaluated the possible relationship between changes in balance sheet holdings by the FED and BOJ and the exchange rate found in the PLS structured statistical analysis (Models A and
B). More specifically, this analysis provides a direct mathematical interpretation of the significance, level, and direction of any possible relationship between central bank balance sheet holdings and exchange rates that this research could then evaluate with respect to a proposed hypothesis.

This paper conducted Model C over the period starting 11/25/2008 and ending 5/15/2013. Project C only consists of one data set. This data set represents the majority period for which the FED has been conducting non-traditional monetary policy. This research utilized the SmartPLS program to compute resampled standardized regression weights with respect to the original samples. In total, there are 1000 samples with corresponding regression weights between all possible construct relationships.

Next, this research evaluated the t-statistics (computed by taking the original sample and dividing it by the standard error of the resample distribution) of each distribution with respect to the 95% confidence interval. (Degrees of freedom equals 1000 so corresponding two-tailed t-statistic at the 95% confidence interval is around 2.000.) This research considered any relationship with a t-statistics less than 2.000 to be not significant. If a particular relationship was significant, then this research would evaluate the mean total effects for the resample distribution with respect to the bootstrap hypothesis shown in Equation 2.

In the case of Project C, both t-statistics were greater than 2.000 (refer to Table 3). This research then evaluated the mean total effects as well as confidence intervals of these two distributions with respect to the two hypotheses proposed for the bootstrap method.

Referring to Table 6, the analysis fails to reject the null hypotheses. Reason being, over the time period 11/25/2008 and ending 5/15/2013, the total effect estimation of the BoJ’s balance sheet holdings effect on the exchange rate is positive. Extrapolating, this implies that balance sheet holdings negatively related to security yields as balance sheet holdings expanded over the period. Furthermore, yields negatively related to the dollar/yen exchange rate, meaning the yen appreciated against the dollar, assuming balance sheet holdings of the BoJ increased. An analogous situation occurs with the FED balance sheet holdings and the dollar/yen exchange rate. Increases in holdings corresponded to an appreciation in the dollar against the yen.

The fact that this analysis failed to reject the null hypotheses is not surprising given the extremely wide
fluctuation in the exchange rate over the several year period. The next project (Project D) explores a more in depth bootstrap analysis, with periods partitioned by FED non-traditional monetary policy announcements.

Model D Bootstrap Analysis FED Project

Equation 2 evaluates the hypotheses presented in conjunction with the data presented in Table 4 for the data sets outlined in Table 2.

Apparent in Table 4 is the broad fluctuation in the direction of spot rate movements accounted for by respective central bank balance sheet movements. The changes in the accepted hypothesis between successive time-periods depicts this. This is not surprising given the wide fluctuation in the exchange rate and the level of balance sheet holdings of both the FED and BoJ over the large time period and even between the shorter delineations used in this project.

Because the bootstrap structural equation modeling used in this project is a direct expansion of that of the PLS projects, this research was able to present a more condensed graphical representation of the estimated population total effects with respect to the PLS variance estimation graph. Figures 7 through 12 of Graph 4 are condensed graphical summaries of these total effects (Graph 4 is a composite of these figures. It provides a context from which this analysis derived these figures from). Note, because the Bootstrap analysis started 90 days before the PLS analysis, there only exists limited corresponding time-periods in the PLS analysis that could be used for the purposes of overlaying the analyses. Nevertheless, the time-periods have been presented for which data is available; these include sets “2. FED QE 1 Expansion” through “7. FED QE 3”. Looking at Figures 7 - 12 and the corresponding entries in Table 4 (relationship identifiers 2. – 7.), linear trend lines of the exchange rate have been overlaid into the graph clips. In addition, Figures 7 – 12 include a yellow, elevated line that represents the combined, standardized quantity of FED and BoJ balance sheet holdings. An increase in FED holdings, holding the BoJ’s constant, would push the line upwards, while an increase in BoJ holdings, holding the FED’s constant, would push the line downwards. Mathematical analysis
was used to analyze the magnitudes in the changes of the background shaded areas of each bank with respect to changes in the exchange rate (also corroborated by the PLS variance accountancy) in conjunction with the relationship postulated by the estimation of the population total effect. These two relationships were evaluated with respect to each other to determine if the graphical relationship postulated in the PLS analysis are mathematically substantiated by the bootstrap analysis.

In Figure 7, the bootstrap analysis failed to reject the null hypothesis. Figure 7 defines the period of FED QE 1 expansion policy in the United States starting 3/19/2009 and ending 8/26/2010. The two partial hypothesis produced by the bootstrap algorithm for this time period are counter intuitive as they imply simultaneous appreciation and depreciation in the dollar/yen exchange rate when assuming balance sheet holdings of both banks are increasing. A closer look at Figure 7 will reveal that linearly defining a relationship for this large time-period is difficult, thus, it is not surprising that the bootstrap algorithm failed to reject the null.

However, the general trend of the exchange rate (the dotted line) implies a long-term depreciation in the dollar, this trend corroborates the positive estimation of the population total effect of the BoJ node if not accounting for the fact that the BoJ’s balance sheet holdings are actually decreasing on average during this period. The FED node effect is negative however and implies dollar appreciation because of increases in balance sheet holdings. It would seem that, during this time-period, the BoJ was scaling back their non-traditional monetary programs with respect to the scale of the FED’s. The stark rise in the prominent edge of the background shade substantiates this. (Note, to read the background shade, the BoJ’s holdings are subtracted from the FED’s so that you read the prominent edge of the blue shade, this is the dark yellow line in the figure.) The null relationship seems to make sense, in that the scaling back of monetary transactions by the BoJ is effectively magnifying the FED’s QE 1 expansion effects on the exchange rate. Consequently, this is causing a general depreciation in the value of the dollar with respect to the yen. That is, although the FED’s estimation of the total effect implies its increases in balance sheet holdings are causing dollar appreciation. Although the FED’s first foray into non-traditional monetary policy was not as substantial as the program’s later successors, the scaling back of central bank transactions by the BoJ during this time period effectively outweighed any appreciative effects the model estimation might have substantiated by assigning a negative estimation of the population total effect of the FED.

Referring to Figure 8, the general appreciating trend in the value of the yen continues. The negative partial hypothesis of the BoJ and non-significant FED partial hypothesis, however, do not lend themselves to induce an appreciation in the yen. In fact, based on the estimation of the population total effect, one would believe that the yen would depreciate during this time-period. The upward sloping trend line of
the spot rate coupled with a stark rise in FED non-traditional monetary policy accountancy of exchange rate variation in the latter half all demonstrate a counter to the population estimations. The conflicting results of this model could be a result of the volatile nature of the exchange rate during this period.

Continuing on to Figure 9, the period between 6/22/2011 and 9/20/2011 constitutes a period of no active policies by the FED. The relatively short time period and fact that during this time-period the FED was not conducting any non-traditional monetary policy makes the results of the bootstrap estimations of the population total effect unexciting. During this period, you could argue that there was a slight depreciation in the yen relative to the dollar, as highlighted by the dotted trend line. Indeed, the sudden shift in the magnitude of the balance sheet holdings of the BoJ could corroborate this argument, but the fact that the exchange rate seems to hold steady during this period and the fact that the null hypothesis failed to be rejected both make it difficult to define a possible relationship during this time period.

Next, referring to Figure 10, the FED’s Operation Twist program and the dates that it was active (9/21/2011 – 6/19/2012) are analyzed. The Operation Twist program was a credit-easing monetary program as opposed to a quantitative easing one. According to the bootstrap model and the accompanying hypothesis, of which both partial hypotheses are significant, the balance sheet changes during this time-period were conducive to dollar depreciation relative to the yen. Starting from the left, sharp depreciation in the dollar follows sudden appreciation in the dollar. This almost resembles “over shooting” in which investors over adjust to market conditions and subsequently readjust their positions to a more moderate one. This sharp depreciation is simultaneously occurring while the exchange rate variance accountancy by the FED’s balance sheet changes, rise significantly. The large yellow stacks highlight the latter. It is interesting that the large changes in the BoJ balance sheets during this period do not statistically arise to a depreciation in the yen; although the population total effect of the BoJ node is hardly large. However, it seems obvious that we would expect to see depreciation in the yen after the large downward swath of blue shade. This appears to occur during the, roughly, first third of Figure 8. Nevertheless, it would seem the FED’s monetary programs are certainly more potent against

the exchange rate during this period. This is perhaps a consequence of the credit-easing programs of the FED as opposed to the BoJ’s mainly quantitative ones at that time. Bolstering this conclusion is the fact that the BoJ’s balance sheet holding changes do not statistically account for much of the variation in the exchange rate during this period.

Next, Figure 11 refers to the period in which the FED expanded their Operation Twist credit-easing program. Both estimations of the population total effect during of this period are not significant. The BoJ node is significant, however, at around the 85% confidence level. The positive estimation implies appreciation in the yen relative to the dollar. This does not seem to make sense considering the large increase in BoJ holdings during this period and the corresponding drop in the exchange rate, e.g. yen depreciation. In addition, the considerable up trend in BoJ balance sheet holdings accountancy of exchange rate variation during this period does not seem to substantiate the bootstrap’s outcomes.

Now referring to Figure 12, it is apparent that the large influx of liquidity produced by the BoJ’s balance sheet holdings should be causing a large depreciation in the yen relative to the dollar. However, there is no significant relationship between BoJ balance sheet holdings and the exchange rate during this period. In fact, it would appear that the FED’s balance sheet holding changes are having a much more substantial effect on the exchange rate than the BoJ’s. This could be a manifestation relatively constant FED holding increases during this period. The inherent consistency in the FED’s QE 3 program could have indirectly amplified any effects the BoJ’s holding increases might have had on the exchange rate.

Conclusion

It would seem that linearly defining a relationship between the balance sheet holdings of the BoJ and FED and the dollar/yen exchange rate is extremely difficult. In fact, there may be some nonlinear relationship in play here in which outside investors are either exponentially amplifying the effect that these programs have on the exchange rate, or in effect nullifying them as they take speculative actions against central bank programs. The nullifying effect may be more applicable to the BoJ’s actions where, as Blinder said, when a country exists near or at a liquidity trap, central bank transactions must
become massive to invoke any kind of significant effect on domestic inflation (Blinder, 2000). Nevertheless, there most definitely appears to be some relationship between central bank non-traditional monetary programs and exchange rates. This is directly apparent throughout the PLS analysis results and graphically throughout Graph 3.

The subject of relating non-traditional monetary policy to exchange rates is indeed difficult. However, this research provides compelling evidence that a relationship does exist. Future research will define and test particular models that could help explain the exact relationship between these two.

References


Introduction

Hybridity, being neither the one nor the other, is an important theme in many works of Beur fiction, or literature written by the children of Maghrebi immigrants to France. Ultimately, hybridity is a question about belonging—an interrogation of personal identity and the community to which one belongs. For this reason, it is natural that Beur literature would express and struggle with the concept of hybridity. Hargreaves further explains how Beur literature is linked to the Beurs’ daily lives:

[T]he Beurs have, however, been compelled to migrate constantly between the secular culture of France and the traditions carried with them by their Muslim parents from across the Mediterranean […] [Beur literature] focuses on the key problematic which has preoccupied Beur writers: the articulation of a sense of personal identity, forged in the particular circumstances which are those of an ethnic minority in France.

(1)

Beur literature, then, is a unique form of minority discourse. While members of this community are part of a minority because of their ethnic origins, many of them also identify with the ideals of the majority due to being educated in France. The minority discourse offered by Beur literature is a hybrid one.

Minority literature attempts to speak for a minority community. In the case of Beur literature, the authors are attempting to highlight problems of identity and social issues that the community faces. It is not enough to have a coherent group that does not identify, either wholly or partly, with the majority in order to have a minority group. A minority group is an unrepresented unit that is seeking representation. Harrison (2003) defines a minority group in more detail:

[I]n practice minority groups are “unrepresented” in a democracy, if by “minority group” one understands a number of people with some significant attribute in common whose worldview and/or interests as a group are inevitably consistently ignored or rebuffed by the majority from which, as a group, they differ and sometimes dissent… The term “minority group” may serve, then, as a vague and euphemistic way of describing a section of the population that could be described more precisely as disenfranchised or oppressed, through the effects of a concrete political history. (99, author’s emphasis)

Kastoryano (2002; 2010) describes the Maghrebi community in France in the above light—a community that is in the process of negotiating its identity with the State in order to gain greater representation. Likewise, Begag (2004; 2007) discusses identity in the process of negotiation.

One of Beur literature’s primary goals is to expand the idea of what it means to be French. Present in many of the texts is ambivalence between holding onto one’s ethnic origins and family heritage, and the desire
to succeed in French society—“a desire for acceptance and integration into the dominant culture and a desire for resistance to that culture” (Lay-Chenchabi 140). While protagonists often struggle with this either-or conundrum, many of the authors do not necessarily view it as choice between two opposites; rather, they attempt to “use their ambivalent position to their advantage” (Lay-Chenchabi 140). Their writing showcases their cultural hybridity and the struggles associated with it. Showcasing hybridity—or making the presence of a hybrid known—resists against certain elements of the dominant culture while adopting fundamental elements of that dominant culture, thereby working to expand the membership of the nation to include their minority community. In other words, showing hybrid identities is a way of critiquing the larger society, in effect pushing for a more inclusive national vision of citizenship.

This article will examine the narrator-protagonist in La Honte sur nous by Saïd Mohamed. The first section will place him within the larger socio-political context and debate over integration. Bhabha’s theory of hybridity and its subversive potential will be of particular importance. Next, Mohamed’s work will be compared to the textbook example of Beur fiction, Le Gone du chaâba by Azouz Begag. This paper will argue that many parallels between the works one would expect to see are weak. Finally, the conclusion will ask if Mohamed’s work can even be classified as Beur fiction given these weak parallels.

The Narrator-Protagonist in Context: Hybridity and Integration Challenges

French identity, like identity in other Western nation-states, has traditionally been binary—that is, an “us vs. them” understanding of citizenship and political identity. The “us vs. them” paradigm may have worked before immigration and globalization, when populations were separated by geography. However, as the former colonial subjects immigrated to the metropolis, they confronted legacies of colonialism and muddled identity distinctions. Just as in the colonial era, hybridity became an important identity-effect (Bhabha 170). This new population was neither the one nor the Other, and became a minority population within national society. This section will examine the integration challenges posed by hybridity. Specifically, immigration, Islam, and racism, and the presence of these integration challenges in La Honte sur nous will be discussed.

Bhabha explores the impact of immigration on the postcolonial world, and explains that “[m]igrant communities are representative of a much wider trend towards the minoritization of national societies” (221). As already discussed within the context of France, many traditional national societies are founded upon the idea of a common people, an identity that links the whole community. The minoritization of these societies is thus problematic for any narrative of identity used to build national pride, unity, and identity.

The effect of this process should not be overlooked. Just as in the colonial era, hybridity supplants claims to cultural authority. That is not to say, however, that hybridity seeks to destroy a culture. Rather, “cultural enunciations in the act of hybridity” are simply in “the process of translating and transvaluing cultural differences” (Bhabha 252). The goal is to allow the presence of difference in the community, thereby allowing the members of an immigrant community to become a part of the nation.

For many Beur authors, including Azouz Begag, economic migration during les trentes glorieuses, or thirty years of Post-War economic expansion in France, is the reason their families came to France. Their fathers went to France to work from the Maghreb (a region in northwestern Africa, much of which was colonized by France), and the family followed later. Some writers were born in the Maghreb, and others were born in France. Regardless, the setting for most works of Beur fiction is in the banlieues—the impoverished projects at the periphery of the city where immigrants lived and where many of their descendants continue to live.

The setting remains the same for La Honte sur nous, although, interestingly, while the narrator’s father was indeed an immigrant worker, he was not part of the wave of immigrants during les trentes glorieuses. His immigration was earlier, during World War II. After having worked for the French colonists in Algeria as a laborer, he was recruited into the French Army during the war (Mohamed 185). For the French army, the Second World War was brief, and so le vieux, the narrator’s father, found himself in the German Army. He tells the reader that he did not work as a soldier, but as a laborer building the Atlantic wall (Mohamed 200, 186). After the defeat of Germany by Allied Forces, le vieux returned to France where there was a great need for laborers to rebuild the country. He eventually left France and his children behind and returned to
Morocco when the narrator was younger, only to find that his friends had immigrated as well (Mohamed 189). Le vieux’s story does not fit into a common narrative of immigration from the Maghreb. Even so, this inconsistency changes neither the narrator’s nor his father’s situation; both face the same challenges as many other immigrants.

The reader does not know too much about the narrator’s childhood. It is clear that the narrator’s parents were not a strong or positive force in his life. The character of la mère in the first part of the novel is not the narrator’s biological mother. Le vieux reveals that the narrator’s mother abandoned her children. In turn, le vieux gave them over to the custody of the French state: “Puis elle [la mère] m’a laissé seul avec vous. Si je compte bien, vous trois et les trois autres, ça fait six qu’elle aura lâchés à l’Assistance publique” [Then she [the mother] left me alone with you. If I count well, you three and the three others make six that she turned over to the state] (Mohamed 187). The narrator’s mother left for a simple holiday, and le vieux, who knew she was leaving for good, shut his eyes and did not ask any questions (Mohamed 187). In short, the narrator’s family life was far from stable.

The narrator’s situation does not improve. He is not accepted into a beaux-arts program, so he goes to a trade school to learn to be a typographer (Mohamed 19). He does not like his work: “Et il suffisait de quelques secondes pour réduire le travail à néant” [It only took a few seconds to reduce the work to nothing] (Mohamed 22). He does not have much hope for his future, nor much confidence in his ability to do what he wishes: “Moi, seule l’usine m’attendait” [In my case, only the factory was waiting for me] (Mohamed 35). His true passion is reading and writing; this is an escape for him. He always has a book with him, and takes advantage of every idle moment: “Lire pendant dix minutes, c’est passer une journée avec un écrivain” [To read for ten minutes was to spend a day with a writer] (Mohamed 46). Much of his day is dedicated to reading and writing (Mohamed 62). In the end, it is only his love for reading and writing that drives him to travel in order to find himself and gain experience.

Another integration challenge faced by France is Islam’s relationship with the Republic. Islam has always had a tenuous relationship with the Republic dating back to the colonial era. Bozzo notes, “La situation coloniale a créé un rapport incontestable de domination sur l’islam” [The colonial situation created an incontestable relationship of domination with Islam] (81). Frankly put, France did not trust Islam or its adherents, and feared that Muslims could be incited to overthrow the colonial administration on religious grounds (Bozzo 81). In fact, a system of control was put in place in the name of security well before the Third Republic (1870-1940) to counteract this supposed threat (Bozzo 2006, 81-82). For instance, Bozzo notes that Muslim clergy were considered public functionaries, and that the Republic created medersas, or colleges to train Muslim clergy (écoles supérieures musulmanes), “pour y former un personnel ‘fiable’” [in order to form there a ‘reliable’ staff] (82). For that reason, the 1905 law on laïcité, or the strict separation between Church and State, could not be applied in Algeria despite its status as a département, “sauf à remettre en cause tout dispositif de contrôle” [except by undermining every device of control] (Bozzo 82). Thus, the people of Algeria, many of whom would immigrate to France later, were not acquainted with the foundational principle of laïcité.

In the present day post-colonial world, Islam’s relationship with the Republic continues to be tenuous. Specifically, the compatibility of Islam and laïcité is a central issue in the debate on integration. Kastoryano argues that “[t]he issue for states is negotiating the ways and means of including the descendants of immigrants into the political community” (4), though she notes that in France this pragmatic negotiation is sometimes juxtaposed against rigid, pro-republican political rhetoric. The crux of these negotiations is the debate around laïcité (Kastoryano 6). Just as laïcité was never implemented in Algeria before independence, it has yet to be fully and satisfactorily implemented in France today:

Parallèlement, dans l’ex-métropole coloniale, où les musulmans de France sont pour les trois quarts algériens, l’exigence d’une authentique séparation de la religion musulmane et de l’État, dans l’esprit de la loi de 1905 sur la laïcité, n’a pas encore trouvé pleine satisfaction à ce jour [In the same way, the demand for a true separation of the Muslim religion and the State in the spirit of the law of 1905 on laïcité has yet to be fully implemented to this day in the ex-metropolis, where three-quarters of French Muslims are Algerian]. (Bozzo 83)
In this debate, a religious and ethnic identity is falsely and automatically assumed; Muslims are always assumed to be from the Maghreb, and Maghrebis are always assumed to be Muslim (Kastoryano 25). This community, ethnic and religious, is antithetical to the French model of republicanism, for “France, heir to the Revolution, does not recognize any ethnic or religious community” (Kastoryano 34). Because of this, “Islam eventually came to signify an entire culture in its own right” (Kastoryano 88) instead of a part of, though slightly different from, the larger culture. As such, Muslims and Maghrebi immigrants have been cut off from French culture. Additionally, the identity of Muslim has been muddled with the identity of Arab among some groups, and with that identification comes a host of assumed negative identities, including delinquent and even terrorist (Deltombe and Rigouste 199).

The laïcité debate is directly tied to the immigration one, and in many cases they seem to be one and the same; there is a concern among the larger French body politic that Islam—and by extension Muslims—is inassimilable into French culture. Indeed, the word “assimilation” has largely been reserved for immigrants from other European countries, while the world “intégration” has been reserved for immigrants from states where Islam is a strong force, especially states in the Maghreb (Kastoryano 31).

In La Honte sur nous, Islam is not important—in fact, it is barely mentioned. This is a stark contrast with many other works of Beur fiction in which Islam and faith often play a central role. Most protagonists come from Muslim families, even if the protagonists themselves are not practicing or particularly devout. In Mohamed’s work, however, there are few references to religion. Le vieux, the narrator’s father, is Muslim, which is unsurprising given he was a first-generation immigrant and has since returned to Morocco. Le vieux’s identity as a Muslim is clear from the start; when he recognizes his son, he cries “Fatma!” repeatedly (Mohamed 165). By contrast, the narrator explains that he would pray to Jesus Christ as a child:

Je connaissais toutes les prières, je les avais apprises au catéchisme, le jeudi matin, dans l’arrière-salle du bistrot. Laquelle, pour l’occasion, se transformait en lieu d’enseignement religieux. Je demandais de l’aide au seigneur Jésus, juste un coup de main quand la vie sentait le roussi. Je joignais les mains et le priais de ne pas nous laisser orphelins [I knew all the prayers; I had learned them at Catechism on Thursday mornings in the back room of a bistro. This room, for the occasion, would transform itself into a room for religious instruction. I would ask the Lord Jesus for help, just a hand when life was beginning to go bad. I would fold my hands together and pray to him to not make us orphans]. (Mohamed 194-195)

The fact that religion is not a major theme but only mentioned briefly is important. The narrator, instead of sharing the religious identity of his father and wider Maghrebi immigrant community, is by and large secular, but was raised identifying with Christianity. The laïcité debate does not concern him at all.

A final important postcolonial issue to consider that has implications for identity is the issue of racism, around which the “Beur Movement” was born. In 1983, La Marche pour l’égalité et contre le racisme [The March for Equality and against Racism], or simply La Marche des Beurs [The March of the Beurs], occurred. Reeck refers to this moment as “the Beur generation’s political coming-of-age” (5). The march was in response to the election of an extreme right, xenophobic candidate of Le Front national, as well as to increasing tensions between young people in the banlieues and police forces (Reeck 5). It was organized by a small neighborhood group called SOS Avenir Minguettes in Lyon, and it would end up being “France’s longest and largest demonstration march” (Reeck 5). It ended in Paris on the steps of the Elysée Palace, where demonstrators were met by socialist president François Mitterrand. Among other things, the President promised to make the improvement of the banlieues a priority. Soon, however, the Beur movement fractured and fell apart, and the President’s promises were not kept (Reeck 5-7).

The identity as an immigrant, especially an immigrant from a former colony, and the presumed identity, whether correct or not, of Muslim are targets for the extreme right. The definition of the extreme right in France, as one might expect, varies depending on the time period one considers. Winock says that while the extreme rights is “trop vague, trop empirique, trop vaporeuse” [too vague, too empirical, too vaporous] (238), it generally can refer to multiple philosophies and political movements, including “ultraracisme, nationalisme, fascisme, pétainisme, national-populisme, nazisme […]—dont il est malaisé de préciser le dénominateur commun” [ultra-racism,
nationalism, fascism, Petainism, national populism, Nazism [...]—of which it is difficult to specify the common denominator] (Winock 238).

Today, the most powerful extreme right group is without question *Le Front national*, a party founded by Jean-Marie le Pen in 1972 (Winock 154). The timing of the party’s rise to prominence is not a surprise. The economic downturn in the late-1970s, coupled with the liberal immigration policies during *les trentes glorieuses*, made the party’s platform of economic populism seem attractive to a larger swath of the population. The party’s “war horse,” according to Winock, has been immigration (155). Part and parcel of its platform of economic populism and positions on immigration was its xenophobic positions. As Winock explains:

*S’il y a du chômage en France, il n’y-a-qu’à renvoyer chez eux les étrangers: ce “n’y-a-qu’à,” réponse toute simple aux maux du jour, est typique de l’univers mental de l’extrême droite* [If there is unemployment in France, the only thing to do is to send foreigners to their native homes: this “the only thing to do is” overly simplified response to the evils of the day is typical of the intellectual universe of the extreme right]. (247)

The scapegoats during recent times of economic downturn have been immigrants, notably immigrants from the Maghreb. Economic populism is thus coupled with xenophobia, which is linked to Islamophobia. In the end the product is racism, both within certain institutions and in interpersonal relationships.

Unsurprisingly, *La Honte sur nous* and many other works of Beur fiction reflect the above realities. In an episode early in the novel, there is a discussion among a couple of characters about the risks of carrying drugs on them. The narrator’s friend, Mollets de Coq, persists that there will not be a problem. When asked what will happen if he is stopped by the police, Mollets de Coq replies, “Est-ce que j’ai une sale gueule ? Tu as plus de chance d’être contrôlé que moi !” [Do I have an ugly mug? You have a greater chance of being stopped than I!] (Mohamed 37). While there is no explicit indication that the characters are discussing racial profiling by the police, the assumption that the narrator has a better chance of being stopped may indicate the presence of the discriminatory practice.

In another episode, the narrator is hitchhiking across Spain. When the narrator tells the trucker with whom he is traveling that he is going to Morocco, the driver freely gives his opinion on the country and counsels the narrator to stay in Europe:

*A mon avis, [le Maroc] c’est un pays de sauvages ! Là-bas, ils dépouillent père et mère. Je connais les Marocains pour les avoir vus à l’œuvre à Barcelone. Ils nous ont bien aidés contre les bolcheviques. Mais ce sont des violeurs. Des tueurs que rien n’arrête ! [In my opinion, [Morocco] is a country of savages! They skin fathers and mothers over there. I am familiar with Moroccans because I saw them at work in Barcelona. They helped us a lot with the Bolsheviks. But they are rapists. Killers which nothing can stop!]. (Mohamed 138)

The narrator stops listening to him: “Je n’écoutais plus” [I was no longer listening] (Mohamed 139). This is the only time the narrator does not give his driver the courtesy of listening, seemingly encouraging the reader to stop listening and to disregard the driver’s comments, as well (Reeck 112).

The reader sees a reversal, however, towards the end of the text. Instead of police from France, it is the border security in Morocco with whom the narrator has problems. The border security thinks he is a terrorist and that his passport is a fake: “Vous êtes Libyen ! Vous parlez arabe ! Votre passeport est faux ! [You are Libyan! You speak Arabic! Your passport is fake!]” (Mohamed 155). The narrator admits that he appears to be from North Africa, and that it must be strange to the guards that he cannot speak Arabic despite what he looks like (Mohamed 154). He explains to them that he is indeed French: “Mais je suis français ! Je suis né en France, ma mère est française, et je ne parle que le français !” [But I’m French! I was born in France, my mother is French, and I only speak French!] (Mohamed155). The officials do not believe him, however, and continue to accuse him of being a terrorist. He is allowed to pass after he asks to contact the French consulate and is made to sign a form.

In a diverse and multi-cultural France, the old narrative of identity is being challenged; yet these officials on both sides of the Mediterranean Sea are guards of the old, binary narrative of identity. Similarly, the preservation of this identity narrative is a central
concern of the modern political right, both moderate and extreme (Winock 172, 182). Many on the right today believe that immigrants—and in France that term carries the connotation of Muslims—are trying to undermine traditional identity and institute a pluralistic society. To them, this would be tantamount to destroying French cultural identity, which is dependent on shared history and memory” (Oschewitz 189). Foreigners are thus regarded as the enemy within, and are predictably treated with contempt by some in society.

The above narrative of a republican vision of identity versus a multicultural vision of identity is too simplistic (Oschewitz 189). Certainly France is multicultural, and many advocate for a vision of identity that will take that into account. However, *La Honte sur nous* seems to promote a more inclusive vision of national identity. This is in line with many other works of Beur fiction. The protagonists are not asking for an entirely new France; they are asking to be included as a recognized part of France. This notion agrees with Oscherwitz’s observation that “[the multicultural model of citizenship] seems in many ways to be a national model, and in that regard, to accept many of the basic principles of the Republican model (most notably an insistence on the importance of the collective past and of collective memory)” (189). Mohamed’s *La Honte sur nous* simply asks France to reconsider that collective past and collective memory, especially including the sometimes violent colonial era and postcolonial issues, to make them more representative of the varied histories of its diverse population. While History may be straightforward, histories are often more nuanced and complicated. Throughout *La Honte sur nous*, the reader sees these histories, including the narrator’s own. Ultimately, *La Honte sur nous* and other works are looking for a working definition of French identity instead of a static definition of who is French.

**A Comparison of *La Honte sur nous* and *Le Gone du chaâba***

*Le Gone du chaâba* by Azouz Begag is one of the foundational texts for Beur literature; the text is one of the more well-read works in the corpus, and the author is a leader of the movement in concrete ways. For that reason, one should compare *La Honte sur nous* with Begag’s work when assessing if it can fall under the category of Beur fiction.

Begag employs many strategies for showing cultural hybridity, all of which have been well-documented and studied by scholars (e.g. Hargreaves; Reeck). In the text, the narrator-protagonist is a young child, and because of that he faces particular challenges. He struggles with the French language, for instance. Indeed, this is a critical problem he faces, and is the most overt symbol of his hybrid identities. Azouz, the protagonist, is forced to migrate between his two linguistic cultures quite literally; the walk to school is a symbolic bridge between his different lives. His family life represents his ethnic origins and heritage, while his school life represents his life as French. This truly is a unique challenge for second-generation immigrants. It is unique because neither the protagonist’s parents nor his children will have to face the same struggle with the language.

Azouz’s Arab parents are illiterate. The responsibility of translating school documents falls to the children, specifically to Azouz’s older sister. The reader also sees that Azouz has inherited linguistic patterns from his parents. The writer attempts to show these differences to the reader; for example, *monsieur* and *madame* to Azouz is *m’sieur* and *m’dame* (Begag 69). Begag even includes a glossary of terms in the back of the book, as well as an explanation of the father’s speaking patterns to help the reader along. Moreover, the very title of the novel is a mixture of French and Arabic, reflecting the protagonist’s bi-cultural identity (Hargreaves 39).

The malaise caused by this constant migration between his family’s ethnic world and the world of French society understandably leads to intense frustration on the part of the protagonist. Azouz now feels foreign in his own ethnic community. He is rejected by many of his family friends from the shantytown because of his academic success. He is also unsure about how to navigate his two communities. For instance, when the police come to investigate claims that Azouz’s uncle has been illegally slaughtering sheep, Azouz gladly helps the officers while the rest of his community feigns ignorance of the French language. Additionally, when his class discusses hygiene practices, Azouz reveals his family hygiene standards in the shantytown, much to the embarrassment of his friends. Later, he manipulates his identity to fit in at school. Azouz pretends to be Jewish to make friends, and acts as if he does not see his mother when she comes to pick him up from school in order to keep up the charade. It is only when a new teacher who
taught in Algeria takes an interest in Azouz’s life, even teaching him how to write Allah in Arabic, that Azouz begins to feel at home in his bicultural persona.

Le Gone du chaâba, however, is much older than La Honte sur nous, which was published in 2000. Because of the time difference, Mohamed’s work is very different, even if it, too, is set in the 1980s. As already discussed, the unnamed narrator does not have to migrate between these two worlds of family and of history is in reference to Christianity.

Another major difference between La Honte sur nous and Begag’s work is that the narrator does not struggle with the French language; it is the only language he knows. In fact, the narrator comments on those who do not speak correct French. He describes the personnel at the cleaning service he works at before trade school: “Pas un seul, à part le chef, ne parlait correctement le français. Quelques Portugais, des Yougoslaves, des Espagnols et moi partagions l’honneur de la tâche” [Not a soul, except for the boss, spoke French correctly. A few Portuguese, some Yugoslavs, some Spanish and I shared the honor of the tasks] (Mohamed 2000, 40). For him, language—specifically the French language—is an important element of his quest: “Je voyageais en poursuivant ces buts: écrire une histoire, toucher du doigt l’amour et atteindre la félicité par la parole” [I was traveling while pursuing these goals: to write a story, to experience love first hand, and to attain bliss through words] (Mohamed 136, emphasis added). There does not seem to be a parallel between the language hybridity of Begag’s narrator and that of the narrator in Mohamed’s work.

And yet, the greatest parallel between the works is arguably how the French language is used by the authors. While they use language in a slightly different manner, they use it unconventionally. Begag interweaves French, slang from Lyon, and Arabic to express the narrator-protagonist’s identity. The very title of the novel, Le Gone du chaâba, is a reflection of the narrator’s bi-cultural identity. The title follows French grammar rules; “gone” is a slang term from Lyon meaning kid or boy; and “chaâba” appears to come from Arabic, although no precise translation is given by the author in the glossary of terms (Hargreaves 39). This occurs within the text, as well. For example, Azouz refers to his mother as “Emma,” the Arabic term for mother. Azouz’s language is also a mix of French and Arabic, though not to the extent of his parents’ who still have a strong accent. In other words, language is a tool for expressing the cultural hybridity of the narrator-protagonist.

La Honte sur nous takes a similar approach. Mohamed mixes classical French with slang. The use of slang may be seen as a perversion of the French language—a language which is highly regulated by The French Academy. Changing the language may also be a strategy for expanding the vision of the nation. As discussed in Mbembe, the French language may be seen as the daily incarnation of the Republic; the two are intrinsically linked (151). In short, by expanding acceptable vernaculars, both works expand the range of acceptable narratives of identity. Just as Bhabha theorizes, hybridity, or in this case the deliberate subversion of the language, subverts cultural authority. The parallel between the works ends there, however. Whereas Begag’s novel puts a premium on ethnic differences and cultural hybridity, Mohamed’s work does not. The reader notices that his speech patterns are not exclusive to him or an ethnic community; rather, they are indicative of his social milieu. His friends—whether they are Maghrebi or not—share his speech patterns and seem to understand the narrator-protagonist without difficulty.

Like Azouz, the narrator certainly does live at the margins of society; however, the parallels between the works are strained at best. By virtue of age difference, Mohamed’s narrator faces very different challenges than Azouz. The novel opens by explaining that he is a delinquent: “La plupart des profs me prédestinaient à un avenir à ne pas piquer des ortolans. Selon eux, j’étais mûr pour Fleury-Mérogis” [Most of the profs had predestined me to a future of failure. According to them, I was ripe for Fleury-Mérogis] (Mohamed 7). Additionally, the narrator’s community is dangerous. Several scenes show harsh realities the narrator must face. In one instance, he and his friend Hector are threatened by a drunken shop owner with a gun, and escape unscathed thanks only to the owner’s wife (Mohamed 73). In the scene immediately thereafter, the narrator and Hector discover that Hector’s roommate has committed suicide at a nearby hotel (Mohamed 75). The narrator also discusses the criminal history of
le petit, a quasi-brother of the narrator’s. His offenses include punching a bartender in the stomach, who subsequently died of a burst liver. After serving his jail sentence, le petit became drunk and stole a car (Mohamed 63-64). The narrator later comments that primal and tribal violence is the path to manhood in the banlieues: “Triste époque, les mômes des banlieues n’ont plus que le rodéo du samedi soir et les gyrophares pour devenir des hommes” [A sad time, the kids of the banlieues have nothing more than le rodéo of Saturday night and the flashing lights of police cars to become men] (Mohamed 150).

It is no wonder the narrator wanted to quit this community and go on a quest. More than that, however, Begag explains that it is necessary for a rouilleur (someone stuck in the community) to literally travel in order to become a dérouilleur (someone from this community who is ultimately able to exit the vicious cycle and succeed): “…for I am convinced that it is only when you move, when you travel, that you find yourself. You become free when you step outside your inner walls” (125). The narrator’s quest is necessary for the development of his identity. The narrator explains it in terms of learning about the world: Mais si je me sentais capable de parler de l’éternité de l’amour, l’expérience me manquait. Comment raconter ce que je n’avais pas vécu puisque je n’arrivais pas à aborder le réel? [But if I felt myself capable of talking about the eternity of love, I was lacking experience. How could I tell of something I had not known since I was not able to reach reality?] (Mohamed 69). The narrator feels he must gain experience in order to be able to write.

The above does not mean that the narrator rejected the whole of his community. To the contrary, he is typically happy when he meets friends from his former community at Chez Nicole. He even comments that Chez Nicole was a haven for him: “Il n’y avait qu’auprès de la bande de ‘Chez Nicole’ que je trouvais ma part d’existence, un semblant de sérénité intérieure” [It was only with the patrons of ‘Chez Nicole’ that I could find my share of existence, a semblance of inner peace] (Mohamed 70). Even so, the narrator here is not in Azouz’s position; he does not feel the need to reject one community and its traditions for another.

The inclusion of other communities and the telling of untold histories are more important in La Honte sur nous. The narrator is not concerned with being a part of the larger French society like Azouz. In a way, Mohamed’s protagonist is moving from one periphery to another; however, Azouz is being pulled from the margins to the center. In addition to being part of a marginalized community, the narrator is removed from the traditional education system and placed in an experimental remedial program; he joins the Communist Party in the beginning chapters; he works as a cleaner, printer, and sweeper; he travels with truckers, hearing unheard war stories from World War II and the colonial conflicts, which for him is “not antithetical to telling history” (Reeck 113); and his quest is from the marginalized banlieues to a former colony. Reeck notes that Mohamed’s goal is “to speak silence, to unblock censorship, to tell history” (106).

The narrator is perceived as a hybrid. He shares some characteristics with the textbook example of Azouz, namely a similar setting (social milieu and time period), similar parentage, and similar socioeconomic statuses; however, the unnamed narrator’s life does not have many parallels with Azouz’s. Most notably, he speaks perfect French and is not Muslim, the two most contentious issues in debates on immigration and integration.

His ethnic appearance and where he lives are the only things that can account for his status as an outsider. While all hybridity is imposed by society (and in that way forced), this situation is different. Instead of hybridity based on legitimately being neither the one nor the other culturally and being forced to migrate between two worlds, this hybridity is based on nothing except appearances. This is a sort of forced hybridity—an automatic relegation to the marginal Third Space solely because of perception.

Conclusion

The above differences then raise the question: Can La Honte sur nous be considered Beur fiction? On many counts, the answer seems to be yes. For one, the setting is consistent with other works. The narrative takes place in the 1980s, and the action is primarily in the banlieues. Like many other works, the novel recounts a journey, and then ends with the narrator embarking on another journey. Finally, several themes are similar to other works within the corpus. Identity, both individual and cultural, is a primary concern of the author. And similar to some other works, the narrator remains unnamed, although it is clear to the reader that the novel is a work of autofiction or autobiography. The reader also sees themes of distrust toward the police
and French State (Hargreaves).

The work does not entirely fit the traditional template, however. The primary difference is the unnamed narrator in *La Honte sur nous* does not feel a need to navigate or travel between two cultures—the distinctive feature of Beur fiction (Hargreaves 1). In truth, the narrator never seeks to travel from the periphery to the center; rather, he travels from periphery to periphery, from the *banlieues* in France to Morocco to visit his estranged father. In that respect, Mohamed’s work is more similar to works by third-generation Maghrebis in France; and since Mohamed published the work in 2000, it is unsurprising that a more contemporary style and viewpoint are represented. Additionally, like third-generation Maghrebi authors, the author does not shy away from portraying the violence of the banlieues. But one also sees an emphasis on poetry throughout the work, much like more contemporary works. Indeed, one leader of third-generation Maghrebi authors believes that “poetry speaks louder than the language of violence” (Reeck 163).

In the end, *La Honte sur nous* may be a bridge between the second and third generation Maghrebi authors in France, connecting Beur fiction to recent Maghrebi fiction. As a bridge piece, Mohamed’s work shows the reader the struggle that immigrants from the Maghreb continue to face in French society; as Reeck demonstrates, the promises of President François Mitterrand have yet to be fulfilled. On the flip side of the coin, Mohamed’s work also shows the changes within the Beur movement. Like Azouz in *Le Gone du chaâba*, the narrator-protagonists of the 1980s once reflected the desire of second-generation immigrants to be accepted fully into society despite their hybrid identities—to move from the periphery to the center. However, as the unnamed narrator-protagonist in *La Honte sur nous* shows us, the third-generation Maghrebis today are intensely frustrated, and are much less interested in moving to the center, instead, they move from periphery to periphery, discovering and recounting their own untold histories along the way.

Notes

1. *A département* is an administrative unit in France, similar to a province, and may be contrasted with a territory or colony. But, in fact, there was more than a binary department/colony distinction. After WWII, there was a complex system of classification:

   (1) departments in the French metropolis; (2) the old colonies, like those in the Caribbean; (3) the new colonies; (4) Algeria, whose territory was part of the French Republic (thus making Algeria a department), but whose inhabitants could be either citizens or colonial subjects; (5) protectorates; and (6) mandates (Burbank & Cooper 2008, 515). Algeria, then, while a department and part of France, was also characterized by Other-ness.

   Fleury-Mérogis is France’s largest maximum security prison.

   *Le rodéo* is a rite of passage for many male adolescents living in the poor *banlieues*, and is a way for them to manifest their presence to the outside world:

   The idea of taming and subjugating the object of this attention is omnipresent in this sacrificial ritual, as is the idea of death. This new-style rodéo is very precisely orchestrated. A young ethnic, alone or with accomplices, brings in his catch from the outside world, a powerful automobile in which he races up and down at high speed between the apartment blocks lining the avenues, screeches the tires, heats up the motor, shifts gears so as to break the gearbox (and your brainbox with it!), and, when the ceremony is over, smashes the car against a wall or some other obstacle before setting fire to it. The best is, thus, branded and subjugated […] Seeing the police arrive in force in the hood after a rodéo or riot, as if entering a battlefield, is a way of demonstrating one’s existence on the spot. (Begag, *Ethnicity and Equality* 41, 51)

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