

“Sh-Boom” and the Bomb: A Postwar Call and Response

Raging fire balls, vaporized islands, ear-splitting clamor, mushroom clouds, shock waves, moral abomination, massive guilt, backyard bomb shelters, and thinking the unthinkable—all of these were part of the psychological and emotional Zeitgeist of Postwar America. Test Able, the first atom-bomb test off Bikini in the Marshall Islands, took place in the summer of 1946. At that time, many Americans feared the consequences. Some believed gravity would be destroyed, or that the ocean would turn to gas, or perhaps an underwater explosion would blow a hole in the bottom of the sea and cause it to run completely out. Others expected earthquakes, tidal waves, or radioactive waves that would, a Portland, Oregon taxi driver feared, “peel his skin like a banana.”¹

None of these suspicions materialized, though the site of the explosion became the name of a woman’s two-piece bathing suit. In Homeward Bound, Elaine Tyler May links the photograph of Hollywood sex symbol Rita Hayworth that was physically attached to the bomb to the “name for the abbreviated swimsuit the female ‘bombshells’ would wear. The designer of the revealing suit,” she says, “chose the name ‘bikini’ four days after the bomb was dropped to suggest the swimwear’s explosive potential.”² William O’Neill, the author of *American High*, points out that nuclear weaponry at that time was a concern so frightening that “popular culture absorbed and trivialized” it.³ Looking back, it seems excessive to have worried so about a *fission* bomb. The more frightening aspects of a *fusion* bomb (the Super bomb, a thousand times more powerful) were not revealed until the mid-1950s. Then instead of “bikini” entering the vocabulary it was “Sh-Boom,” the title of a 1954 Rhythm & Blues song, a tune that generated its own much larger cultural explosion.

Bikini's remote setting, far removed from regular air and sea routes, was matched by the song it inspired. "Sh-Boom," written and performed by five men no one had ever heard of (the Chords), in a genre that penetrated less than 6% of the music business (Rhythm & Blues), recorded by a small, independent label dedicated to producing black music in black styles by black performers for black customers (Atlantic Records), was released on an Atlantic subsidiary label that failed and died after twenty records (Cat). Nevertheless, inspired by the sound of a nuclear explosion, "Sh-Boom" is often credited as being the transitional song between R&B and rock 'n' roll, which is to say it was the song that turned a marginal music restricted to a minority sub-culture into a mainstream music that fascinated American youth first and world youth next.⁴

This essay tells two stories. The first has to do with nuclear weapons: how Americans felt about them in the postwar era, how they articulated their fears, and how, thanks to the misfortune suffered by Japanese tuna fishermen aboard the *Lucky Dragon* in 1954, they learned about the horrendous power of the hydrogen bomb. The second story has to do with American popular music: how a marginal music (Rhythm and Blues) was mainstreamed, not only diffusing into white popular culture but transforming and dominating that culture as well. As it turns out, the Chord's "Sh-Boom" is central to both stories, perhaps the ultimate example of call and response, the bomb's distant and decisive echo.

The Musical Scene

The contributions of African American culture are central throughout the history of popular music in America. Stephen Foster's plantation songs were inspired by it; the syncopation of Scott Joplin's classical ragtime piano music influenced the ragtime song; New Orleans Dixieland jazz was an instrumental version of the blues, an African American folk

tradition; and Fletcher Henderson's big band arrangements established the sound of swing. Since the innovations were always appropriated and adapted by white musicians, it was Paul Whiteman who became the King of Jazz and Benny Goodman, after he hired Fletcher Henderson as his arranger, who became the King of Swing. White appropriation of black music was not new in the postwar era: white wholesale adoption of black music would be.

These adaptations aside, while there had always been a small minority of white Americans who loved black music, no one in 1954 could have conceived of a record made by a black quartet signed to an independent R&B label purchased in mass quantities by white teens and played in heavy rotation by white radio stations. Music programming in 1954 was almost as segregated as Southern schools and lunch counters. Some independent R&B record companies, however, knew that young white Americans loved black dance rhythms. At Atlantic Records, which had been formed in New York in 1948, Jerry Wexler discovered that Southern white high school and college youth were buying records made for the black market even before Northern white kids. Since it was impossible for Atlantic to get its music played on white radio, Wexler says, the company exploited the interest of white youth by releasing summer records deliberately designed for the hundreds of juke boxes in the beach pavilions up and down the Virginia and Carolina seacoast.⁵

The juke box turned out to be a wonderfully efficient mechanism for the diffusion of black music, since an estimated 40% of all phonograph records at the time were sold to juke box operators.⁶ Jim Parker, a major R&B collector, jukebox historian, and participant in the Southern beach scene, remembers dancing to Atlantic records on the juke box with as many as six hundred white youth at a single pavilion.⁷ But high school and college kids who visited the beach pavilions returned home to Charleston, Charlotte, Atlanta, or Tuscaloosa and discovered

where they could buy the records they had danced to. This created a crisis for the guardians of southern racial purity. One circular distributed to businesses that catered to youth in the South declared, “NOTICE! STOP! Help Save the Youth of America. DON’T BUY NEGRO RECORDS. If you don’t want to serve negroes [sic] in your place of business, then do not have negro records in your juke box or listen to negro records on the radio. The screaming idiotic words, and savage music of these records are undermining the morals of our white youth of America. Call the advertisers of radio stations that play this type of music and complain to them!”⁸

The first R&B vocal group to find a white audience was the Orioles, whose “Crying in the Chapel” (1953) on the Jubilee label sold a million copies. This was not, however, an original performance; the song was a cover version of a Country & Western song. The record generally agreed to signal the potential for a crossover trend of vocal group R&B was “Gee,” by the Crows, an original tune with harmonized vocals that included a patterned riff of “Doo doo-duh doo doo” under the lead. Released in June of 1953 as the “B” side of the song that was supposed to be the hit, it took almost a year for disk jockeys in Los Angeles to flip the record over, after which East coast jocks did the same.⁹ Enough pop jocks played the song to cause it to reach the national R&B charts *and* pop charts on the same week (April 10, 1954)—an unprecedented occurrence taking the traditional music business by surprise.¹⁰ The reason this song is not widely known is that it was not “covered” (imitated) by a white group on a major label. No one thought to do it then, since the success of “Gee” seemed merely to be a fluke. Everyone in the music business would know better after “Sh-Boom.”

Covering—recording a song that had been previously recorded by another artist—had been a part of the music business for more than a quarter-century, and by the 1950s virtually all

hit songs existed in multiple versions. Major labels (RCA, Columbia, Decca, Mercury, Capitol, and MGM) covered one another regularly and sometimes covered themselves. A pop song might be released first with a female vocalist, for example, and later with a male singer, a novelty arrangement, or an instrumental version for dancing. In addition, it had recently become routine for major labels to issue country & western covers of pop songs (country and western music represented a different market controlled by the same major interests). In this kind of covering, however, big companies with white artists covered other big companies with white artists. But the trend which began in 1954 and continued into 1955 appeared to take on a new intentionality. An original R&B performance by a black artist was released by a small, independent (sometimes black-owned) record company. Then it was covered by a white performer's version of the song, released by a major white-owned record company with the capability for national distribution and promotion. The white version was not so much a cover of the song as a copy, an attempted duplication of not only the melody of the song but the musical voicings and rhythmic quality of the arrangement, plus in many cases the singer's distinctive vocal style as well.¹¹ The poet Langston Hughes called the practice "Highway Robbery" and said it had been going on for more than one hundred years.¹²

The Toxic Trip

As R&B began to spread in America, events were taking place on the other side of the world that would set the stage for the transition between R&B and rock and roll. On January 22, 1954, Aikichi Kuboyama, believing he was headed for the Solomon Islands, left the port city of Yaizu on the island of Honshu and assumed his role as radioman for the Japanese tuna trawler *Lucky Dragon*. Thirty-nine years old, a devoted husband and father and the oldest licensed

wireless radio operator in Yaizu, he was respected by the crew not just for his radio skills but for his general knowledge. He knew some English, even used English words in conversation, and was thought to be the smartest man onboard.¹³ He did not know that within the next eight weeks he and his boat were destined to become front-page news and household words not only in his country but also in America and around the world.

The fishing trip itself started badly: the chief engineer left a spare engine part on shore, one that the 250-horsepower engine would surely need. Instead of going back (a bad omen), the boat continued to a nearby port for a replacement. There it ran aground and couldn't be pulled out by a mackerel boat (another bad omen) and had to wait for high tide to resume the journey. The weather soured on the second day out, angering the crew of twenty-three once it discovered that the boat was headed for the Midway Islands, 2,000 miles east, dangerous fishing grounds with rough seas. On its last trip, the *Lucky Dragon* had come home with thirty-three tons of fish, mostly tuna, a catch worth \$15,000. After deducting \$3,000 in operating expenses and paying some other charges, the crew split the balance 50-50 with the owner. But that was last time. The crew on this trip needed a large payday. Shinzo Suzuki, for example, sailing for the first time, had to borrow money to buy his boots, pants, and food. He was in serious financial trouble, leaving his wife and two children only \$10 to survive his two months absence.¹⁴ He was hardly the only member of the *Lucky Dragon* who needed a little luck.

The Contemporary Fear

Seven thousand miles away, a group of five black men from the Bronx were finally enjoying some good luck of their own. Oscar Cohen, of Associated Booking Corporation, claims to have discovered the Chords, literally "singing in the street."¹⁵ While technically a new

group, the members of the Chords had known one another for years when they were part of three different groups. Buddy McRae, the second tenor, had been in the Keynotes; Jimmy Keyes, the first tenor, in the 4 Notes; and Carl Feaster (lead tenor) and his brother Claude (baritone), the Tunetoppers. Over the next few years the quartets merged into a single group, taking the name of a quartet in which one of the new members, Ricky Edwards (bass), had performed. All were in their early twenties. Rupert Branker was the pianist.¹⁶

One of the group's new tunes was "Sh-Boom," their own collective composition based upon the fear of nuclear war. Such a fear was appropriate in the Cold War era. "Awareness of the bomb and recognition of nuclear fallout danger during the fifties were as least as intense as anything the interwar moderns had to acknowledge," W.T. Lhamon says in Deliberate Speed.¹⁷ The United States detonated the "world's first thermonuclear explosion" at Eniwetok Atoll in the Marshall Islands on November 1, 1952. The blast replaced Eniwetok with a hole in the sea floor 175 feet deep and a mile long. "Scientists figured that if the blast had been detonated over land," historian James T. Patterson says, "it would have vaporized cities the size of Washington and leveled all of New York City from Central Park to Washington Square."¹⁸ The fear intensified in 1953 when it was revealed that the Soviet Union had detonated its own hydrogen bomb. That year *Popular Science* used fluorescent ink on its May cover to show more accurately the "fiery sight" of an atomic explosion. Inside the issue, articles featured new military defensive weapons ("atomic cannons") and ways of protecting homes and families in the event of an atomic attack (building a bomb shelter can "cut your risk way down").¹⁹

Paul Boyer, author of By the Bomb's Early Light, notes that "it was the United States' 1954 test series that really aroused alarm."²⁰ Especially, it was a bomb named Bravo, dropped from a 150-foot tower on March 1, 1954.²¹ R&B historian Marv Goldberg remembers

the year as one when New York City residents in particular were gripped by the terror of the possibility of an atomic bomb:

It was 1954 and people were afraid. The United States and the Soviet Union were locked in the “cold war,” an arms race that many believed would ultimately destroy civilization (if not the planet itself). As a public school student in New York, I was issued military-style dog tags (so that I could be identified if I were found wandering around dazed after a sneak attack) and participated in “duck and cover” drills at school (not realizing that I, the desk, and the very walls would be vaporized if Russia dropped an atomic bomb). Air raid drills were held frequently, to clear the streets and herd everyone into air raid shelters (which were probably just as bomb-resistant as my desk). Of course, the government didn't bother to tell us that they'd written off all the big cities in this country.²²

The science publications were only one set of voices among many expressing fears of nuclear devastation. The U.S. had to “prevent something of ‘dreadful significance’ happening to us,” *America* editorialized; we were facing “a dreary, dangerous future.”²³ The head of the Office of Defense Mobilization announced that “the Soviet Union is capable of delivering the most destructive weapon ever devised by man on chosen targets in the United States.” The Defense Secretary, Charles E. Wilson, “estimated that Russia would be capable of dropping an H-bomb on the United States in perhaps a year.”²⁴ According to one expert, “Atomic warfare is inevitable and the United States faces the possibility of destruction by bombs.” What to do? “Go underground.”²⁵

The Chords, “who hailed from the Morrisania section of New York's South Bronx,” started writing “Sh-Boom” in 1953, “while sitting in a Buick convertible,” second tenor Buddy

McRae recalls. “When [the kids on the block] talked to each other, they'd say 'boom.' They'd say 'Hey, man, boom, how ya doin'.” Jimmy Keyes, the first tenor says “‘Boom’ was *the* slang word. If you were standing on this block for five minutes, you'd hear that slang word fifteen times or more. We would take the 'boom' and make it sound like a bomb: 'shhhhhh-BOOM'.”²⁶ Indeed, “Sh-Boom!” *sounded* like a bomb. That kind of creativity typified so-called “street corner groups,” though such “quartets” (a group of not necessarily four members) also practiced, Arnold Shaw says, in “school yards, subway stations, park benches, and tenement hallways and stoops as free rehearsal halls. Other than sports and crime, singing was the major route by which underprivileged blacks could escape the degradation of second-class citizenship. There were literally thousands of these groups.”²⁷ Robert Pruter notes that they were recorded primarily in New York, Chicago, and Los Angeles:

The vocal groups of the 1950s were unsophisticated kids in matters of music, but what emerged from their use of vocal harmonies on America’s urban street corners was a profound and genuine folk music that resonated in all later eras of black music and sometimes in popular music. . . . They composed songs that evoked the feelings and attitudes of kids growing to adulthood in the fifties. And for these reasons the vocal harmony groups formed one of the crucial strands of vernacular popular music that made up rock ‘n’ roll.²⁸

The combination of a black quartet singing innocent and innocuous lyrics turned out to be an important element in developing the explosion that R&B music represented. Vocal groups were the first black acts to break through the television barrier and to be played on white radio music formats—important for enlarging the colors included in America’s popular musical landscape. Shaw points out that these breakout groups (the Dominoes, Clovers, Orioles, Drifters,

Harptones, Five Royales, Crows, Moonglows, Penguins, Spaniels, Midnighters, and Chords) differed from such earlier quartets as the Mills Brothers and the Ink Spots because they achieved acceptance “on their own terms,” not “sugared” for a white audience.²⁹

Fishing Aboard the *Lucky Dragon*

There was nothing “sugared” about life on the *Lucky Dragon* at this time, less than six weeks before it became famous. When fishing started on the fifteenth day out, it took the crew almost four hours to throw the lines. A good initial catch would be a good sign for the whole trip, but it was bad—fifteen fish—fewer pounds than the bait fish they used. “We should have gone to the South Seas,” some mumbled. The next time they began to fish the main line broke. Forty miles of line and almost half of their sets were gone, possibly ruining the whole trip. Engine trouble followed, then a storm. The fishermen feared they would end up returning home with nothing to show for their labors.³⁰ By the end of February they had iced down only 156 fish (nine tons), enough for expenses but with little left to split between crew and owner. Moreover, the fuel supply dictated that they must turn back after throwing their lines only one more time on March 1. Kuboyama warned the captain and the fishing master to stay away from Bikini Atoll, where the Americans had tested atomic bombs eight years before; rightfully, he feared the Americans.³¹

On the morning of March 1 Shinzo Suzuki woke up early and went on deck. He saw a dazzling light that changed to a yellow red and then to a flaming orange. He dashed to the cabin to tell the crew, “The sun rises in the west!” Others went up to see for themselves. Many believed such a sight could only be caused by a *pika-don*, a Japanese term which combined “thunder” with “flash,” invented in 1945 to describe the horrors of Hiroshima and Nagasaki.

After several minutes many of the crew returned to the cabin for breakfast, but as they ate the boat suddenly trembled as if shaken from below. A great sound wave surrounded and enveloped it simultaneously from above and below, two concussions, like rifle shots.³²

Kuboyama estimated that seven minutes had passed between flash and report and calculated that the boat was 87 miles from the explosion. The fishing master ordered the crew to begin hauling lines immediately. The day was “darker than it should have been for the time,” and the weather changed quickly. Two hours later “tiny bits of sandy ash” like “the beginning of a snowstorm” rained on boat and crew, getting in eyes and ears and touching lips. Some thought it was salt and tasted it. Others said it was sand; some said coral dust.³³

Nine fish were boated, cut open and gutted, then cleaned and frozen. The ash fell on the fish, too, and was hard to wash off. Some of the men didn’t have their usual appetite for lunch, and one vomited up his breakfast. There were more poor appetites at night. In the morning, some of the men’s eyes had “glued together by a thick yellow discharge which had dried to a hard crust during the night.” In addition, though the crew was disappointed to be going home with such a skimpy catch, it was happy not to have been detected by the Americans, whom they feared and who, 7,000 miles a way, released a two-sentence announcement of the detonation of “an atomic device.” The *Lucky Dragon* apparently never received this message, nor had it received any message warning of a test being conducted near Bikini.³⁴

“Sh-Boom!”

Atlantic Records

While the crew of the *Lucky Dragon* was dragging itself home, the Chords prepared to enter their first recording studio. Atlantic had been looking for a group to cover Patti Page’s pop hit “Cross Over the Bridge,” and it liked the Chords’ version of the song. It didn’t like “Sh-

Boom,” however, or any of their other original material.³⁵ In addition, it decided to launch the group on a new subsidiary label, Cat. Perhaps Atlantic did not want to risk its reputation on this new group, or perhaps it deliberately positioned Cat Records to penetrate a completely different market. The term “cat,” short for “cat music,” came out of the South—used by white teenagers to describe the R&B records they loved to dance to (a decade earlier, *Billboard* pointed out, youngsters “used records” by the top swing bands for this purpose). The idea was that the roster of Cat would be “entirely separate from Atlantic” and would use new talent not already signed to the parent company.³⁶

Charlie Gillett believes that if Atlantic had known what was about to happen in the world of music the label would have called this new subsidiary “Rock and Roll Records.”³⁷ Atlantic Records was a small rather inaccessible operation in 1954, and Arnold Shaw remembers climbing “steep flights of wooden stairs” to the top of a four-story building on West Fifty-sixth Street. The room was tall and good-sized with several desks and a grand piano. At night “the desks were pushed into a corner to turn the office into a recording studio.”³⁸ Jesse Stone, the house writer and arranger, rehearsed the vocal groups.³⁹ The Chord’s session was conducted on March 15, 1954.⁴⁰

The Long Haul Home

By March 15 the Lucky Dragon had already been home a day, arriving on a Sunday, when the local hospital ordinarily saw only emergencies. But during the return voyage, the men complained of itchy skin around their hands and necks. Kuboyama and others appeared dark and sunburned in the face, many had sores and tender scalps, and one fisherman’s hair had started to fall out. The boat did not radio for help for fear of getting in trouble for being too near an

American test zone. On arrival, Kuboyama took some radio equipment in for repair and then went home. “Daddy looks like a Negro,” his oldest daughter observed. “Look at his face. How black he is.” The next day the crew unloaded the catch, and the 165 fish, including the nine that were contaminated, ended up in four major Japanese cities.⁴¹

It took the Japanese press an additional two days to break the dramatic story: “23 Men Suffering from Atomic Disease.” A reporter who had seen one of the crew at the hospital said the man looked like “something from another world” and coined the term “ashes of death.” Subsequently, both the crew and the *Lucky Dragon* were swarmed by reporters. Never had the doctors at Tokyo University Hospital seen such levels of radioactivity. A bit of one crew member’s hair “placed on a piece of photographic film reproduced on the developed film a perfect image as though it had been photographed with ordinary light.” Even one of the newspaper reporters believed he was infected, as did some “comfort girls” the crew members had entertained. Kuboyama proclaimed, “From this day on, unhappiness in our family began.”⁴²

When a biophysicist found the fish caught by the *Lucky Dragon* highly radioactive (the press coined them “crying fish”), panic gripped the fish markets. Consumer hysteria over fish, a staple of the Japanese diet, was equivalent to an American scare over Mad Cow disease threatening the entire domestic beef supply. Meanwhile, American authorities who visited the contaminated fishermen issued vague and optimistic statements (the men were in better shape than expected and would recover in a few weeks), but the Japanese were infuriated when it was revealed that the Americans suspected the *Lucky Dragon* of spying for the communists. To make matters worse, while denying that anything could be wrong with tuna caught by the Japanese, America set new standards for tuna destined for the U.S. market.⁴³

Musical and Nuclear Experiments

Back in the United States, as yet untroubled by the Bikini test, Jesse Stone's arrangement gave "Sh-Boom" "a quick, light beat," Gillett says, "jaunty rather than aggressive, and the voices were soft, quite unlike the current sound of the Drifters and the Clovers. Still, the tenor sax solo, by Sam 'the Man' Taylor, was quite tough."⁴⁴ All of the attention paid to "Sh-Boom," however, was unmistakably *after* the fact. It is clear that the song that began an explosion in the popular music business was merely the "B" (throwaway) side of the Chords' first release. The record that started it all, R& B historian Al Pavlow admits, wasn't "typical of the well thought out musical experiments that had made Atlantic a force."⁴⁵

Just as Atlantic failed to see the commercial possibilities of "Sh-Boom" and the extent to which the song would virtually destroy the artificial barriers between R&B and pop, so would the U.S. government fail in its "well thought out" experiment. According to one version, official meteorologists predicted that the winds would blow fallout from the test to the northeast, though they actually blew to an area south, infecting an American destroyer, which was prepared for this, and twenty-six military weather observers on Rongerik Island, who also knew what to do. No one, however, told either the Marshall Islanders or the *Lucky Dragon* crew what to expect and how to prepare.⁴⁶ Others believe that the scientists, meteorologists, and military people knew exactly what the winds would do to the radioactive debris on March 1, 1954, but the test was seen as so important that it went ahead anyway.⁴⁷ All parties agree that the unexpected power of the blast astonished everyone.

Americans did not learn about the Super bomb test until the plight of fishermen on the *Lucky Dragon* was made public in Japan. Reuters broke the story on March 16, though the *New York Times* did not get it onto the front page until a day later ("Japan Gets Radioactive Fish:

Nuclear Downpour Hit Ship During Test at Bikini—U.S. Inquiry Asked”). Japanese police were looking for 12,000 pounds of shark and tuna with a radioactive count of 7.5 millimeters, the *Times* reported, and Tokyo had asked its Washington embassy to request a formal inquiry.⁴⁸ It was feared that the incident, the front page headline in all Japanese newspapers, “would become a new focus of spreading anti-American feeling.”⁴⁹ In a smaller inside story, the chairman of the Joint Congressional Atomic Energy Committee announced that the U.S. “had the hydrogen bomb and could deliver it anywhere in the world.” While this capability had been “generally known for some time,” previous statements only referred to a “hydrogen device.”⁵⁰

The following day, still on page one, the *Times* described the power of the blast as “hundreds of times greater than any previous man-made explosion,” leaving “scientific instruments unable to record the full effects” and pushing radioactivity “beyond the safety zone boundary of the test area.” Sources for the story were said to be “well qualified,” but their identities “could not be named.”⁵¹ The matter was off the front page on March 19, but the implications of the blast returned on the 20th when John Foster Dulles, the Secretary of State clarified the concept of “massive retaliation” as part of the administration’s “New Look” policy. The purpose, he said, was to warn the Soviet Union that “if they attack the United States or our vital interests we will hit them with everything we have.”⁵² Though Japanese scientists at Tokyo University discovered strontium-90 in a pinch of dust from the *Lucky Dragon* and later the presence of uranium-237, the U.S. initially refused to reveal to them the type of bomb it had detonated. Meanwhile, the condition of the Japanese fishermen deteriorated. Their white cells, red cells, and bone marrow cells were down, and their sperm counts indicated complete sterility. “I would never marry one of the *Lucky Dragon* crewmen,” a young lady told a street reporter.

While U.S. authorities made antibiotics available to treat the crew, it would not, for national security reasons, reveal the type of bomb it had exploded (“the riddle of the ashes”).⁵³

Japanese doctors, experienced with radiation injuries from World War II, attended to the crew through April, also an important month in the history of American popular music. Cat 104, “Cross Over the Bridge” b/w “Sh-Boom,” was released that month along with three other Cat records. In May, starting in Los Angeles, “Sh-Boom” was the side turning up all over the country on the R&B territorial charts, singled out by *Billboard* as a “Best Buy” in R&B (a “sleeper” beginning to break through).⁵⁴ By then, Atlantic had reversed the order of the songs in trade magazine display ads: “Brand New Song—Brand New Group—Brand New Label all Exploding for a Hit Together!!! ‘SH-BOOM’ b/w ‘Cross Over the Bridge.’”⁵⁵ In June, Atlantic finally knew what it had with “Sh-Boom,” so it re-released Cat 104 with “Sh-Boom” as the “A” side and replaced “Cross Over the Bridge” with another song by the Chords, “Little Maiden.”⁵⁶ In addition, it was already known that the song was going to be covered by a pop group on a major label. What started out as a throw-away side perhaps issued as a favor to the group was now the focus of serious business decisions. What had happened? It is not that the ballad “Cross Over the Bridge” failed to find an audience (Harlem disk jockeys received many requests for this “swinging rendition”),⁵⁷ but it paled in inventiveness and excitement to “Sh-Boom.”

“Sh-Boom”

The original “Sh-Boom” is an up-tempo AABA song⁵⁸ with 8-bar phrasing and a shuffle-beat. Instrumentation is voice, bass, guitar, and drums with a tenor saxophone (dirty sax) break. In the lyric itself, while the lead singer asserts that “Life could be a dream, *if*” (my emphasis), the background voices respond with a more ominous “Sh-Boom Sh-Boom” “Boom

A-Boom,” or, on several occasions, “Doo doo doo doo Sh-Boom.” These are not nonsense syllables like “Hey nang a ling long, alangala langala langala langala, Oh bo bip, a dibba doba dip” which also appear.⁵⁹ As Chords first tenor Jimmy Keyes said, the riff represented by “Sh-Boom” is onomatopoeic, suggesting the sound and chaos of a nuclear explosion much the way the Japanese term *pika-don* suggested both sound and sight. The tenor sings lead in the verses, but the bass singer performs the bridge. Al Pavlow says that the arrangement “had an edge in craziness” resulting in “a record that was not only a novelty by pop music standards, but also a novelty within the field of rhythm and blues.”⁶⁰ Marv Goldberg calls it a “landmark tune” for R&B, responsible for the other “nonsense songs” it spawned within the year: “Oop Shoop,” “Voo Vee Ah Bee,” “Oobidee Oobidee Oo,” “Chop Chop Boom,” “Shtiggy Boom,” “Ko Ko Mo,” “Do Bop Sha Bam,” “Oochie Pachie,” “Do-Li-Op,” “Boom Magazeno Vip Vay,” and “Sha-Ba-Da-Ba-Doo,” among others.⁶¹

The Crew Cuts’ cover is cleaner, crisper, and while close to the original arrangement it is ultimately much less interesting. The tempo is slower, for one thing, and the tenor sings the whole song. Instead of a simple rhythm section there is a full orchestra with horns and reeds playing response riffs sung by the group in the original. Moreover, the “boom” effect of background voices is replaced by two dramatic moments featuring a pitched kettle drum. The two versions played back to back, reveal the cover’s inferiority, though it sounded absolutely fresh and novel to the white audience that heard it first. While the Chords’ version ended up ninth on the *Billboard* pop charts (“the first time in the fifties that an R&B original on an independent label made the top ten”) the Crew Cuts ended up Number One. For Pavlow, two major repercussions of this “event” ensued. First, it “focused the attention of the entire record industry on the rhythm and blues field as a potential source of hit song material,” and second, it

led to widespread imitation within the field of R&B itself. “Vocal groups sporting their flashiest onomatopoeia,” he says, “tried to concoct another ‘Sh-Boom,’ and in so doing created a sub-genre which in retrospect would be called doo-wop.”⁶² What was new in the cover version, however, was that it copied not only the vocal but the arrangement as well.

Carl Beltz observes that the Chords’ version “contains a rich blend between the vocal and the instrumental portions of the song” while the Crew Cuts’ “instrumental background is clearly separated from the lyrics,” subordinated to them, and entering “only to fill spaces when the lyrics stop.” The Chords “put everything together,” using the voice “like a musical instrument” with the “suggestion that the singers were creating lines as they went along and using them to express immediate feelings.” The cover may “have preserved a faint echo of the original beat,” he says, but it “lost its totality of impact by stripping it of its folk spontaneity.”⁶³ While the Crew Cuts’ version was destined to be heard by more people and therefore become more successful, it could rarely compete with audiences who had heard the original first.

There are several versions of how “Sh-Boom” came to be covered by the Crew Cuts on Mercury Records and distributed nationally with pop publisher Hill & Range paying Atlantic’s Progressive Music \$6,000 cash for 50% of the song. Goldberg says that Atlantic instituted the cover deal because it feared distribution problems in getting the record to the West Coast.⁶⁴ At any rate, the demand for the original version of “Sh-Boom” continued to build. On June 5, the Chords had the Number One R&B record in Los Angeles; two weeks later the tune had spilled over into the L. A. pop charts. By July 10, the white cover version by the Crew Cuts made the national pop charts for retail sales and radio air play, sometimes sharing these charts with the original R&B version and, before the summer was out, actually reversing the normal order of things and appearing on R&B territorial charts in Charlotte and Chicago—a clear sign

that barriers between pop and R&B audiences were eroding. In July the Chords were signed by the manager of the Clovers, who bought them a new car for their West Coast personal appearances.⁶⁵ By then there were two other pop versions of “Sh-Boom” vying for attention (“staying as close to the original r.&b. arrangement as possible”) and one country version.⁶⁶

Late Summer and Fall 1954

At the end of August, Aikichi Kuboyama, the *Lucky Dragon* radio man, told his wife he was dying. “My body feels like it is being burned with electricity,” he said. “Under my body there must be a high-tension wire.” He was right. On September 23, 206 days after exposure, he died of radiation sickness, or what U.S. experts described as “infectious hepatitis brought on by frequent blood transfusions.” The U.S. Ambassador sent his wife of twelve years a sympathy letter and a check for one million yen (about \$2,800). Later, the U.S. paid compensation to the Japanese government of \$2 million “ex gratia” (no responsibility). Of that amount, each surviving fisherman received about \$5,000.⁶⁷

Amidst the terror of the hydrogen bomb, “Sh-Boom,” with its imagery of bombs falling, was able to win R&B a loyal audience among whites as well as blacks. Indeed, August 1954 represented a tipping point for Rhythm & Blues: there were now five R&B songs among the top 30 records in the U.S., with “Sh-Boom” ranked both first and fourteenth,⁶⁸ suggesting to the trade that R&B was “no longer restricted wholly to a Negro audience” and that it was “repeating advances made in the pop field of several years ago by country and western music.” In juke box locations that are teen spots, it was revealed, “more spins are registered on the playmeters for the r.&b. version than for the pop version of the same number” (apparently the Crew Cuts only realized half the plays of “Sh-Boom” as the Chords).⁶⁹ By the end of the summer of

1954, the trend detected by *Billboard* that R&B material was “moving strongly into the pop market” was documented on a regular basis.⁷⁰ Independent Atlantic Records was “the most covered label in the rhythm and blues field today,” the *Billboard* R&B editor pointed out, “with at least 18 different record artists doing cover-jobs on Atlantic disks within the last few months.” Luckily for the label, sixteen of the songs were published by its own Progressive Music.⁷¹ “It was only fair that if R&B were to make its mark on the pop music world, Atlantic would be involved in the initial breakthrough,” Pavlow says, “since the company was truly ‘leading the field in rhythm and blues.’ Atlantic had the cream of the R&B crop.”⁷²

In September, “Sh-Boom” seemed to some to be such a threat to mainstream society that it came under attack. Peter Potter, the foreman of the CBS “Juke Box Jury” television show, wondered if songs like “Sh-Boom” would still be issued “20 years hence.” “Much of R&B,” he said, was “obscene and of lewd intonation, and certainly not fit for radio broadcast.”⁷³ The Chords “created a sensation at the time,” Marv Golberg says, “or, disturbance may be more like it. Certain pop disc jockeys and major record company executives, feeling that a trend was developing, began a campaign to disparage the R&B sound. They characterized the words to songs as ‘leer-ics’ (the lyrical content of certain songs was rather suggestive for the period) and commented on the poor quality of the performances.”⁷⁴ The song was also subjected to a parody by Stan Freberg, who after playing the record said, “I hope this puts an end to rhythm and blues.” A barrage of criticism apparently “dazed, bewildered and perplexed” Freberg, and to show that he was merely “spoofing” he appeared on the show a week later with the Chords to make fun of the feud and to “bury the hatchet.”⁷⁵ Also, there was good news and bad news for the Chords. They made a television appearance on the “Colgate Comedy Hour,” singing “Sh-Boom” on their own and “Say Hey, Willie” with Willie Mays himself. Goldberg believes that this “makes them

possibly the first Rhythm and Blues group to appear on Coast-to-Coast television.”⁷⁶ Their new Cat recording, however, “Zippity Zum,” failed to attract either an R&B or a pop audience.⁷⁷ In November the Chords were forced to change their name to the Chordcats to avoid a lawsuit, but their new release under that name, Cat 112, did not succeed. In 1955 they changed their name again, to the Sh-Booms, but their final release, Cat 117, also failed.⁷⁸ Though the Crew Cuts became successful on the basis of “Sh-Boom” (they recorded nine additional hit songs through 1957), the Chords turned out to be one-hit wonders.⁷⁹ What little money they made outside of their personal appearances involved their writing interest in the song itself. In the case of mechanical royalties, for every record sold each member of the group earned 1/5th of one penny.

The Aftermath

Almost a year after being exposed to the fallout of the Super bomb test, the surviving twenty-two members of the *Lucky Dragon* were discharged from the hospital. Three years after that, only one continued to work as a commercial fisherman, but some had married and fathered normal children. Even then, in 1958, the U.S. still refused officially to acknowledge the type of bomb detonated at Bikini four years earlier (though it had stopped referring to it as a “humanitarian bomb,” replacing the term with the more neutral “clean bomb”). But physicist Ralph E. Lapp, using findings on uranium-237 supplied by Japanese scientists, was able to reconstruct the March 1, 1954 accident. He calculated that fifteen pounds of radioactive dust fell on the *Lucky Dragon*, an amount “more than equal to the world’s entire supply of radium.” What had saved most of the crew was the small size of the tuna trawler (it was an all-wooden sampan-type boat weighing under 100 tons) and consequently collected less dust. As for the dust itself, Lapp says, it was the result of the force of the bomb, “equal to the simultaneous explosion of fifteen million tons of TNT.” As he explained:

A quickly expanding ball of fire formed over the edge of the atoll and roared out until it formed a helmet-shaped mass of incandescence three and a quarter miles from edge to edge. Millions of tons of coral were shattered by the immensely powerful and incredibly hot explosion. This was sucked into a raging fire ball, leaving behind a yawning cavity as though some giant had broken off a mile-wide lip of the atoll's projection from the sea. This coral, shattered into tiny particles, churned itself deep into the heart of the white-hot furnace and mixed intimately with a half ton of uranium fragments produced by the explosion. Each little cluster of split atoms, too small to be seen with a microscope, became attached to a bit of coral ash. The latter, about a millionfold greater in weight, thus became highly radioactive due to this atomic marriage. The fire ball then whooshed upward with express-train speed, forming the characteristic mushroom cloud. An awesome, almost pure white cloud spread out over twenty and then even more miles, hovering over a large section of the Bikini Atoll.⁸⁰

That was the bomb called "Bravo," the one that infected the *Lucky Dragon*, panicked the Japanese food market, and broke to the world the secret of the power of the fusion bomb. When America tested a second bomb three weeks later, the combination of the two explosions set off "revulsion" among its European allies and "practically all the people on earth."⁸¹ In addition, the new and frightening reality that was observed seemed to transform everything. "Tremendous changes have taken place in the whole strategic position in the world," Winston Churchill told the British House of Commons, "which make the thoughts which were well founded and well knit together a year ago utterly obsolete."⁸²

So it was with American popular music. African American music, once a tiny piece of the popular music pie, was now its central wedge. In the Fall of 1954, Elvis Presley entered the Sun Records studio in Memphis, Chuck Berry recorded “Maybellene” for Chess in Chicago, Little Richard made his first Specialty record in New Orleans, and Decca’s Bill Haley and the Comets had a Top Ten hit with “Shake, Rattle, and Roll” (a cover of an Atlantic record by Big Joe Turner) and a Number One hit with the first international rock ‘n’ roll song, “Rock Around the Clock.”⁸³ Major white record labels tried to cover R&B songs through 1955, but finally white teens insisted on specific performances of the real thing. In August 1955 New York station WINS—the most popular music station in the largest market in America—announced that it would no longer play “copy” records of hit songs. The era of segregated radio formats and white cover versions of black songs had essentially ended, and the “third revolution” in American popular music was complete.⁸⁴ By the middle 1960s, the R&B charts were folded into the pop charts, since they were essentially the same. Rhythm and Blues, once a marginalized ethnic music, was now just plain American pop.

Today, the influence of African American music on pop is obvious. But the only way to visit Bikini in the Marshalls (still too radioactive for human habitation), is as an advanced scuba diver. Twelve people each week from April to November, as part of an organized tour, have a chance to “explore Bikini’s sunken ghost fleet,” made up of ten major ships anchored in the lagoon as part of the test. One of these is the aircraft carrier *U.S.S. Saratoga*, another the Japanese battleship *Nagato*.⁸⁵ Presumably, the site is tranquil now, fully at peace with the spirits and specters from a half-century ago. But there may still be echoes of sight and sound, flash and thunder, call and response, forever linking the fateful explosion and the song.

Notes

1. "Bikini: Breath-Holding Before a Blast—Could it Split the Earth?," *Newsweek*, 1 July 1946, 20.
2. Elaine Tyler May, *Homeward Bound: American Families in the Cold War Era* (New York: Basic Books, 1988), 110-11.
3. William L. O'Neill, *American High* (New York: Free Press, 1986), 238.
4. Among others who call "Sh-Boom" the first rock 'n' roll song are Eileen Southern, *The Music of Black Americans: A History*, 3^d ed. (New York: W.W. Norton & Company, 1997), 518, and Carl Beltz, *The Story of Rock*, 2d ed. (New York: Oxford University Press, 1972), 25.
5. Quoted in Arnold Shaw, *The Rockin' '50s* (New York: Hawthorn Books, 1974), 79.
6. Charlie Gillett, *The Sound of the City: The Rise of Rock and Roll*, rev. and expanded ed. (New York: Pantheon Books, 1983), 41. For additional information on the diffusion of R&B to pop, see James M. Salem, "Johnny Ace: A Case Study in the Diffusion and Transformation of Minority Culture," *Prospects: An Annual of American Cultural Studies*, 17 (1992): 211-241.
7. Jim Parker, telephone interview by the author, 3 April 1992.
8. Quoted in Arnold Shaw, *Honkers and Shouters: The Golden Years of Rhythm & Blues* (New York: Collier Books, 1978), xxiv.
9. "Rama's 'Gee' A Switcheroo," reprinted in Galen Gart, ed., *First Pressings: The History of Rhythm & Blues: Vol. 3: 1953* (Milford, NH: Big Nickel Publications, 1989), 98.
10. The April 10, 1954 *Billboard* charts for popular music indicate "Gee" in the Number Fifteen position for radio airplay and Number Seventeen for juke box play (32).

11. For additional information on covering, see James M. Salem, *The Late Great Johnny Ace and the Transition from R&B to Rock 'n' Roll* (Chicago & Urbana: University of Illinois Press, 1999).

12. Langston Hughes, "Highway Robbery Across the Color Line in Rhythm and Blues," *New York Age Defender*, 2 July 1955, 10,

13. Though the American press in 1954 called this vessel *Fortunate Dragon*, I prefer the translation used by Ralph E. Lapp, *The Voyage of the Lucky Dragon* (New York: Harper & Brothers, 1958). The account of the tuna trawler in this chapter is taken from Lapp's book, which he dedicates to "Twenty-three Fishermen."

14. Ibid., 1-6.

15. Arnold Shaw, *Honkers and Shouters*, 420.

16. Marv Goldberg and Mike Redmond, "The Chords," *Yesterday's Memories*, 2, no. 3 (1 September 1976): 4-6. This article is based on an interview with two group members: Buddy McRae and Jimmy Keyes.

17. W.T. Lhamon, Jr., *Deliberate Speed: The Origins of a Cultural Style in the American 1950s* (Washington and London: Smithsonian Institution Press, 1990), 123.

18. James T. Patterson, *Grand Expectations: The United States, 1945-1974* (New York: Oxford University Press, 1996), 175.

19. This is the first time that fluorescent ink and regular color ink were used together on the cover of a national magazine. Volta Torrey, "This Month's Cover Is an Historic Step Forward in Printing," *Popular Science*, 162 (May 1953): 2. See also Herbert O. Johansen, "New Guns You Should Know About," 92-95, 228 and Darrell Huff and Paul Corey, "If Your House Were A-Bombed," 96-99, 272.

20. Paul Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (New York: Pantheon Books, 1985), 352.

21. David Halberstam, *The Fifties* (New York: Fawcett Columbine, 1993), 345.

22. Marv Goldberg, "The Chords," *Marv Goldberg's R&B Notebooks*, (2003), <http://home.att.net/~uncamarvy/Chords/chords.html>, (28 December 2004), 1. This website contains hundreds of articles on R&B groups from the 4 Aces to the 5 Wings and from the Al Russell Trio to the Wrens.

23. "The Danger Remains" and "Challenge of the H-bomb," *America*, 22 August 1953, 493.

24. "Capitol Hill H-Bomb Furor: Ike Sets the Record Straight," *Newsweek*, 19 October 1953, 33.

25. "How to End a World: The Truth About the Bomb," *Newsweek*, 19 October 1953, 34-35.

26. Goldberg, *Marv Goldberg's R&B Notebooks*, 4.

27. Shaw, *Honkers and Shouters*, xix.

28. Robert Pruter, *Doowop: The Chicago Scene* (Urbana and Chicago: University of Illinois Press, 1996), xiii.

29. Shaw, *Honkers and Shouters*, xvii.

30. Lapp, 8-18.

31. *Ibid.*, 24-25.

32. *Ibid.*, 24-30.

33. *Ibid.*, 32-35.

34. *Ibid.*, 36-43.

35. Goldberg and Redmond, "Chords," 5. Patti Page's "Cross Over the Bridge" charted on the pop charts for 21 weeks, beginning February 27, 1954 (it was the Number Two song in America for a month). For chart positions in popular music before 1955 I have used Joel Whitburn, *Pop Memories 1890-1954* (Memomonee Falls, WI: Record Research, 1986). For chart positions after I have used Joel Whitburn, *The Billboard Book of Top 40 Hits: 1955 to Present* (New York: Billboard Publications, 1983).

36. "Atlantic Launching Cat Label Subsid," reprinted in Galen Gart, ed., *First Pressings: The History of Rhythm & Blues: Vol. 4: 1954* (Milford, NH: Big Nickel Publications, 1990), 37.

37. Charlie Gillett, *Making Tracks: The Story of Atlantic Records*, British ed. (London: Souvenir Press, 1988), 96. Ironically, of the twenty records released by Cat, the only hit would be "Sh-Boom."

38. Shaw, *Honkers and Shouters*, 393.

39. Gillett, *Making Tracks*, 95. Jesse Stone, who wrote "Shake, Rattle and Roll" under the pseudonym Charles E. Calhoun and hits for the Drifters, the Clovers, and Ray Charles under his own name, had worked for Atlantic almost from the start. Gillett considers him the inventor of "an organized vocal group sound where there had been nothing but doo-wahs" (171). Nick Tosches credits him with adding the bass-pattern rhythm that made Atlantic R&B so danceable (Nick Tosches, *Unsung Heroes of Rock 'n' Roll* (New York: Charles Scribner's Sons, 1984), 15.

40. Goldberg, 15 February 2002 electronic interview.

41. Lapp, 55-57.

42. Ibid., 65-87.

43. Ibid., 90-129.

44. Gillett, *Making Tracks*, 96.

45. Big Al Pavlow, *The R&B Book* (Providence: Music House Publishing, 1983), 47.

46. Halberstam, 345-46.

47. See "A Short History of the People of Bikini Atoll,"

<http://www.bikiniatoll.com/nav.html>.

48. Lindsay Parrott, "Japan Gets Radioactive Fish: Nuclear Downpour Hit Ship During Test at Bikini—U.S. Inquiry Asked," *New York Times*, 17 March 1954, 1.

49. Lindsay Parrott, "Japan Gets Radioactive Fish: Nuclear Downpour Hit Ship During Test at Bikini—U.S. Inquiry Asked," *New York Times*, 17 March 1954, 9.

50. "Hydrogen Bomb Confirmed," *New York Times*, 17 March 1954, 9.

51. "2d Hydrogen Blast Proves Mightier Than Any Forecast," *New York Times*, 18 March 1954, 1.

52. William S. White, "DULLES SAYS GOAL OF DEFENSE PLAN IS TO WARN SOVIET," *New York Times*, 20 March 1954, 1.

53. Lapp, 131-144.

54. "This Week's Best Buys," *Billboard*, 22 May 1954, 59.

55. Display ad, reprinted in Gart, *First Pressings*, 1954, 48.

56. "Notes from the R.&B. Beat," reprinted in Gart, *First Pressings*, 1954, 59. At this point there was obviously no reason to pay mechanical royalties to an outside publisher.

57. "Notes from the R.&B. Beat," May 1954, reprinted in Galen Gart, ed., *First Pressings*, 1954, 52.

58. Of all the structures of the American popular song, AABA (verse, verse, bridge, verse) is the most common. Generally, the words in each verse are different, but the music is the same. In the bridge, sometimes called the middle part, the music takes the listener to a different place and drops him/her back off at the verse.

59. Author's transcription. There are many printed versions of lyrics to the Chords' song available, but none of them transcribes the nonsense syllables with any accuracy.

60. Pavlow, 47.

61. Goldberg, *Marv Goldberg's R&B Notebooks*, 9.

62. Pavlow, 47.

63. Beltz, 29-30.

64. Goldberg and Redmond, 5.

65. "Krefetz to Manage Chords," reprinted in Gart, *First Pressings*, 1954, 68.

66. The Chords' version had broken through to pop, the Crew Cuts' version was "going solidly," the Billy Williams Quartet was doing a pop version for Coral, and Bobby Williamson was releasing a country version for RCA. "Notes from the R.&B. Beat," July 1954, reprinted in Gart, *First Pressings*, 1954, 70.

67. Lapp, 183-84.

68. "Notes from the R.&B. Beat," August 1954, reprinted in Gart, *First Pressings*, 1954, 83, 86.

69. "Pop Music Rides R.&B. Tidal Wave; Diskeries Seeking Another 'Sh-Boom'," reprinted in Gart, *First Pressings*, 1954, 79.

70. Joe Martin, "11 Labels Have Best-Selling Pops, But Diskers Just Getting Started," *Billboard*, 21 August 1954, 19.

71. Bob Rolontz, "Rhythm & Blues Notes," *Billboard*, 4 September 1954, 32.

72. Pavlow, 47.

73. "Potter Blames 'Poor Taste' for Current State of Music," reprinted in Gart, *First Pressings*, 1954, 90 . While there were R&B songs with highly suggestive lyrics, "Sh-Boom" was certainly not one of them. However, it was true that songs licensed to BMI were suddenly being played on AM radio to the detriment of those licensed to ASCAP. *That* was the problem being played out in the ASCAP-BMI feud at the time. For further information about this feud, see Salem, *The Late Great Johnny Ace*, 117-120.

74. Goldberg, *Marv Goldberg's R&B Notebooks*, 3.

75. "Freberg R.&B. Blast Rocks Diskeries," reprinted in Gart, *First Pressings*, 1954, 101 and "Freberg, Chords, Bury the Hatchet," 115.

76. Goldberg and Redmond, 5.

77. Notes from the R.&B. Beat," September 1954, reprinted in Gart, *First Pressings*, 1954, 94. "Zippity Zum" b/w "Bless You" (Cat 109) was a "sparkling platter which we predict will be even bigger than their smash 'Sh-Boom.'"

78. Cat 112 was made up of "Hold Me Baby" b/w "A Girl to Love"; Cat 117 featured "Pretty Wild" b/w "Could It Be."

79. Goldberg and Redmond, 5-6. After leaving Cat Records, the group recorded with slightly different lineups on three other labels through 1960: Vik 0295 (1957), Roulette 4144 (as "Lionel Thorpe," 1959), and Atlantic 2074, 1960. See a complete discography of the Chords/Chordcats/Sh-Booms in Goldberg, *Marv Goldberg's R&B Notebooks*, 19-21.

80. Lapp, 187.

81. "Shock Wave from Bikini," 27 April 1954, 2.

82. "The H-Bomb 'Fall-Out': Lesson of the 'Dragon,'" *Time*, 23 August 1954, 23.

83. For the significance of the period beginning in the Fall of 1954 see James M. Salem, "First Wave American Youth Culture in the Season of 1954-55: Youth and the Mass Media," *American Studies Journal*, n.s. 47 (Summer 2001): 41-50.

84. "Ban on 'Copy' Records Enacted by Station WINS," reprinted in Gart, *First Pressings*, 1955, 91. For the "revolutions" in popular music see James M. Salem, "Johnny Ace and the Third Revolution in American Popular Music," *asi: American Studies Interlink*, Ce de Estudios Norteamericanos, Univ. Alcala, Numero cinco, September 1999, <http://www2.uah.es/asi/travels/salem.htm>, (January 24, 2005).

85. See "Dive/Tourism Information," <http://www.bikiniatoll.com/nav.html>, (December 28, 2004).