Whiteness as Airmindedness: *Juan de la Cierva* (1923-1925), Film and the Airplane

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Abstract
Spanish film culture of the 1920s celebrated the aspirations of technological power and the enjoyment of or anxiety around technology. This chapter historicizes a set of propaganda films made in Spain between 1923 and 1925 about Juan de la Cierva's invention, the Autogiro, a machine that fused the airplane and helicopter. These short hybrid media artifacts—a coalescence of documentary, *actualité*, and advertisement—promoted de la Cierva's invention while also drawing upon and furthering ideas about whiteness and its intimate, if not generative, connection with technology. Balancing theoretical frameworks provided by Paul Virilio and Friedrich Kittler with Richard Dyer and Judy Wajcman's arguments about the raced and gendered construction of technology, I argue that these cinematic objects, which entertained cinemagoers and served military interests, were deeply saturated with the discourse of whiteness. The implicit assumptions of this race rhetoric, which were built into the material specificity of the airplane, were the control of the Spanish and European-identified race over this conquest of the air and the maintenance of the white viewer-driver-pilot.

Key Words Whiteness, Airmindedness, Juan de la Cierva, Film and Airplane, Spanish Film.

Spanish film culture of the twenties showcases the convergence of cinema and aviation. Producers of media across the spectrum—avant garde and popular fiction, the visual arts, cinema magazines and speciality ones too—celebrated both aspirations of technological power and the enjoyment of, or anxiety around, technology.[1] Such contradiction and complexity characterized the rhetoric of industrial progress that stimulated and fascinated Spanish cinema audiences through its mechanical tricks and surprises; it bore the mark of enlightened cosmopolitanism and was a mystical source of wonder. The counterweight—the dystopian view of speed and the shock of technological progress—scripted machines as instruments of destruction and oppression, harbingers of a crisis of confusion, motors of irrational and unstoppable power.

Historicizing early and silent cinema helps us understand how cinema's reflection-production of reality has engaged in questions of war, will to empire, and international flows of power. Returning to this earlier cinematicity allows us to better theorize how the transnational, indeed global, conversation on technological empire was mediated by the rhetoric of whiteness. Whether they were elevated by religious language as vehicles for transcending time and space (releasing humanity from its earthly limits), or modern incarnations of Columbus's ships, or seen as manifestations of a utopian and democratic mode of mass travel, racial discourses structured

cinematic practice at the level of production and consumption. The implicit assumptions of this race rhetoric, built into the material specificity of the airplane, were the control of the Spanish and European-identified race over this conquest of the air and the maintenance of the white viewer-driver-pilot.

In this essay, I examine a set of propaganda films made in Spain between 1923 and 1925 about Juan de la Cierva's invention, the Autogiro, a machine that fused the airplane and helicopter.[2] These short hybrid media artifacts—a coalescence of documentary, *actualité*, and advertisement—promoted de la Cierva's invention while they also drew upon and furthered ideas about whiteness and its intimate, if not generative, connection with technology. Balancing theoretical frameworks provided by Paul Virilio and Friedrich Kittler with Richard Dyer and Judy Wajcman's arguments about the raced and gendered construction of technology, I argue that these cinematic objects that entertained cinemagoers and served military interests were deeply saturated in the discourse of whiteness.

Lines of Sight

As an expression of capitalist modernity, film shares discursive and material affinities with the airplane. As Angela Della Vache cogently writes, "the airplane and the cinema redefined the boundaries of vision, and consequently, of subjectivity" (444). Paul Virilio has argued that the evolution of photo-cinematic reproduction cannot be separated from what he calls the "history of the line of aim" or the "line of sight," a visual epistemology that inexorably weds the act of seeing to the acting of shooting. Understanding the relationship between cinema and aviation involves a brief consideration of the epistemological link of the lens and the weapon. For Virilio the trajectories of the chronophotographic rifle (invented in 1882) and the serial-shot camera invented by Etienne-Jules Marey, the President of the French photographic society, were elemental to cinema. The principal of the chronophotographic rifle, which allowed its user to shoot at and photograph an object at instants during its movement through space (Virilio, *War* 15), was that it not only enabled the taking of pictures in the same moments that bullets were fired, it also enabled mechanized destruction, that of one's immediate opponent and also a series of targets (15). Like the Colt revolver, used against Native Americans, or the Maxim machine-gun, designed to be aimed at indigenous people in colonized domains after its debut in 1884, photographic guns were deployed to manage race.

The technology was not foreign to Spain. During its colonial war with North Africa, fought between 1859-1957, weapons were outfitted with cameras. As in other colonial conflicts, what began as a camera mounted on a dove or a kite, quickly evolved to cameras attached to dirigibles, trains (1898), and then planes. The "triad of the train, steamship and telegraph" had achieved the conquest of space (Schivelbusch 194) but the airplaine had conquered the air. And whereas "panoramic perception" enabled by windows on moving trains was structured into film montage (130), so would vision from a plane become imbricated into the experience of cinema which had internalized the history of lensed weaponry.

As the chronophotographic gun dealt out and recorded mechanized death, it also perfected what Virilio terms "eye-less vision," that is, "vision in which the naked eye no longer plays a role, and seeing loses its direct quality because vision is realized through mediation" (*War* 19). Seeing targets through a lens or a window empowered the viewer, despite the more highly mediated interface. In this sense, airplanes originated as the ultimate military weapon through their ability to destroy entire populations from distances and positions hitherto impossible (the sky) by pilots viewing their target through a window/screen. For Wolfgang Schivelbusch, this "new reality of annihilated in-between spaces" was emblematic of how cinema (or the airplane, for Virilio) brought objects closer to the viewer (42). But greater mediation also meant the loss of empathy triggered by physical intimacy. Automated perception allowed the feeling of racial superiority to flourish. Thus while the camera produced the images that fed pro-war cinematic propaganda, the airplane turned the tide of the war, escalating it to genocidal measures between 1923 and 1925 when Spanish pilots dropped mustard gas bombs on Rif civilian inhabitants.[3] That this episode of the Spanish-Morrocan conflict remains understudied proves the effectiveness of mechanized death for racilialized others—targets acquired by a lens of racially superiority and impunity.

Who or what constituted the subject, or the eye of the camera? These questions occurred to the earliest film theorists. A return to early films about aviation offers the opportunity to reconsider formulations of subjectivity according to both racialized schemes and the mechanized mediation of our visual frame. As the camera and the rifle merged, the question of a human subject's perception became ambiguous. The dilemma of "knowing who is the subject of the state and the subject of war in the era of modern warfare," Virilio says, "will be of exactly the same kind as the problem of knowing who is the subject of perception" (*War* 2-3). Determining

the location of the viewing subject, whether it be the cockpit, behind the camera, the spectator position on the ground or in the cinema, or the targeted individual of an aerial attack, became an epistemological challenge.

While the camera challenged the formerly discrete categories of perception, the technology as well as photographic representations promoted a white-centered subject of camera perception. Such concurrence was not accidental but, to the contrary, a result of the mutually constituted condition of technology and society. As David Lyons has said in reference to surveillance, technologies are neither good nor bad, but they are not neutral (n.pag.). And neither the cinema nor the airplaine is politically neutral. Human actors made specific decisions to create them, while at the same time these actors were mediated by the techno-social networks in which they were embedded.[4] Yet, some scholars may argue that gender, or race, have little bearing on the creation of technology, but technology is "socially shaped" and "part of a system which is never merely technical but also economic, organizational, political and cultural" (Wajcman 34; Dyer 83). In this sense the maintenance of white supremacy depended on its ability to secure a position of dominance behind the camera or in the cockpit of the airplane.

This white-centered technological vision seemed ubiquitious and without boundaries, but accessible only to white subjects who enjoyed individualized and high-relief definition. As Richard Dyer writes, "the invisibility of whiteness as a racial position in white (which is to say dominant) discourse is of a piece with its ubiquity" (3) because photographic media "privilege and construct whiteness" (89). The materials used to manufacture cameras were "developed making the white face as the touchstone," yet the history of this whitening was forgotten; the camera would be seen as an apparatus that was *a priori* "fixed and inevitable" (90). Mid-century Hollywood films displayed the white face as the norm, and Dyer argues that the technological privileging of whiteness "contribute[d] to specific perceptions of whiteness . . . making the white man not only more visible but also more individualized" (99). So even though the airplane was fetishized as pilot-less, as we shall see later in this essay, when there was a pilot, he or she was *a priori* white.

Traditionally, historians have treated as separate categories industrially manufactured objects (planes and films), repertoires of progress (where airmindedness and racialization intermingle), and social and material networks. But these artificial categories mask the dialectical process in which film and aviation participated. For boundaries become increasingly muddied

when we interrogate their content.[5] As a social construction, a plane or a helicopter is not a discrete vehicle, but a "network of heterogenous relationships . . . a network that traced a compromise between different concerns, considerations and actors" (Law and Callon 170). In this sense, films about aviation are not only produced by airplanes, but *create* airplanes, their virtual possibilities and lines of flight. Films and planes, or cinema and aviation, form a set of relations, a network or "a compound reality" (170). Conversely, such as those who have the technology to fly come to dwell within a different "reality" than those who do not possess access to such technology. For Law and Callone, these opposed groups become indissolvably mapped onto the network of relations between aviation and cinema (173). Producers of cinema, pilots in the cockpit, or inventors of flying craft end up on the other side of the race and technology boundary from those produced and captured by cinema, or those targeted or killed by aerial weaponry. Over time, this arrangement is (mistakenly) seen and understood as natural, and from this naturalization are born the singular identities of aircraft (objects with their own consistent qualities) and pilots (individualized and autonomous actors) (174). During the expansion of film culture in Spain in the mid-teens, and perhaps because of it, Spaniards began to identify with pilots, airfield spectators, or the aircraft themselves.

Inexpensive and accessible, the cinema was often the most likely place for people to see airplanes, while racialized others—Moroccans, most often—would invariably be seen as spectator-victims, targets of these planes. Yet the airplane's automated power and fetishistic allure concealed its participation in a network of relationships that maintained racial hierarchies. Like the pilots who dropped the gas bombs, spectators could not see the plane's imbrication in the social and political network that sustained the colonial race wars. Consequently, when the public saw images of Harkas and Moroccan Regulars mounting a Spanish plane to quell the Asturias uprising in 1934 or carry out the coup d'etat in 1936, sheer terror began to spread among spectator-citizens who had only seen or imagined (through film or air spectacles) Spaniards and other whites as pilots or passengers, but not victims of planes carrying racialized others.

"Cinema isn't I see, it's I fly"[6]

Film and airplane mirrored each other's potential space. The early development of the Spanish film industry's insfrastructure—the proliferation of movie theatres and increased production and distribution—parallels the expansion of the Spanish airforce.[7] Spatial convergence of plane and

film, however, tended to be imagined more often outside the realm of war. The Spanish architect Fernández Shaw's 1930 design for a triple-screen cinema was destined to be used as a drive-in movie theatre for both cars and airplanes. Although we might consider Shaw's design visionary, at the time it was logical to assume that aerodromes were like movie houses since airfields, like the one used in the promotional composite film, *Juan de la Cierva*, were arenas of the spectacular, places for recordmaking and flights of competition and voyeurship, "with frequent crashes and risks for both those flying and watching on the ground" (Urry 137). The Autogiro, instead, was seen as a strange windmill of the sky. Neither plane nor helicopter, it was essentially a WWI airplane fuselage with a massive tri-partite helicopter propeller mounted between the nose and the cockpit of the airplane and a second smaller propeller on the nose.

In a memorable sequence from *Juan de la Cierva*, men drag the Autogiro, with its painted face, from a warehouse; immediately, the ground crew prepares the body and the propellors for the upcoming demonstration. The pilot mounts the craft and the crew pulls a cord to start the massive blades of the propeller, an extremely dangerous operation for both crew and bystanders. In the next sequence, the autogiro descends in front of the warehouse in a long arc and continues to fly low to the ground. Will it fly through the warehouse, as do the barndusters? The airfield as a site of attraction was here mediated by film, which inadvertently, through its own internal dualism as a war machine and an entertainment machine, advertises the Autogiro as both military tool and symbol of utopian possibilities in air travel and novel forms of entertainment.

The airfield as cinematic attraction also figured prominently in the Spanish fiction film, *Boy* (Benito Perojo 1925). In this feature-length adventure, two central characters travel to Cadiz seeking distraction from the navy exercises performed with dirigibles and hydroplanes. The review of the film in the newspaper *ABC* in 1926 praised the scenes in which the Spanish Navy and Air Force had supplied equipment, commenting that these particular scenes "fueron recibidas por el público con una gran ovación" (Gubern, *Perojo* 105). Even when the focus of the film lay more on fair attractions, the spatial and symbolic convergence between airplanes and cinema was visible in the logic and structure of the amusment rides and skill games which featured flight and an airplane-mounted gun with a moving target.

In the 1930 short film, *Esencia de verbena: Poema documental en 12 imágenes*, Ernesto Giménez Caballero, Spain's premier aesthetician of fascism, mounted a collage of live filmed images from the Festival of San Antonio de la Florida in addition to intermittent footage of Madrid's summer

fairs, or *verbenas*, such as the Festival of Saint Carmen (Gubern, *Proyector* 430-445). In its fourth chapter, we see a shot of a spinning ferris wheel (*la noria*) taken from a standing position, and then two shot-reverse shots in which the three second reverse shots cut to the dizzying view from a seat on the revolving wheel. The film then jumps to the carousel (*el tiovivo*) where the camera focuses on the continuous movement of the carousel, allowing the spectator no respite from the constant rush of people whirling past like unsutured film frames that disorient and destabilize the film spectators. The film cuts to a collage that frames images of the carousel, the ferris wheel, and static spectators. Even more daring fare rides are the subject of the ninth chapter, in which mechanical flyers (volatines or the "huytoma"), swing riders in small chairs hanging from cables fixed to a revolving columnar base that ironically simulates a zootrope. In another short take we witness the vertical free-fall nose-dives of a mechanical seesaw swing. These haptic images thereby simulate the sensation of flight while recording the experience of amusement rides meant to simulate flying.[8]

Again, the question of perception and its relationship to the "darker" side of modernity reemerges in the sixth chapter, which centers on the shooting stall, or the "atracción del pimpampúm." After the playfulness of the vanguardistas and the exhilarating fair attractions, the question becomes, what kinds of individuals or nations are posited as the subjects of perception or consumers of this technology? Even then, race and the technological divide shadow forth the theatre of war in a spectacular microcosm: the shooting stalls at fairs. *Esencia de verbena*'s footage of the shooting stall focuses on moving targets, a series of *papel maché* and wooden dolls– stereotypes such as don Juan and, more notably, a turbaned figure. This specter of race and the promise of sexuality throught the film underscore the amusement of *Esencia*. Corella Lacasa's summary of *Esencia* echoes this point: *Esencia*, he argues, is an amalgamation of "el lenguaje vanguardista y el casticismo, el canto a la máquina y la devoción mariana, el culto a la urbe y a la esencia mística del paisaje castellano, el recuerdo de la picaresca española y el de la voluntad de imperio" (58).[9]

The forces necessary to win wars—precision, propulsion, velocity, duration, vigilance—preoccupied scientists and military officials, but they also drove the work of engineers, pilots, and filmmakers. Connections between the airplane and the cinema were played out on the level of the individual. Engineers, filmmakers, politicians, businessmen, military officers, aristocratic aviation buffs, and fans of movies and air shows were socially connected through cinematic and

aeronautical circles as well as by the war and the government. All of these agents were mired in the politics of colonial race-wars. At the end of the nineteenth century, for example, the producer Billy Bitzer made short films based on variety shows while he was going to Cuba, sent by the American Mutoscope company to film the events of the Cuban War of 1898.

Similarly, Roman Gubern tells us that the film career of one of Spain's most important directors, Benito Perojo, was in large part boosted by the creative impulse and technical proficiency of Perojo's brother, an aeronautical engineer (*Benito* 20). The Spanish engineer, Juan de la Cierva, who invented the Autogiro, was the son of the criminal lawyer, conservative politican and businessman, Juan de la Cierva Peñafiel. The latter, as War Minister in the administration of Antonio Maura, and supported by *Africanistas*, had firmly directed the reconquest of territories lost in the Disaster of Annual in which Spanish soldiers suffered a crushing defeat by the Rifian forces of Abdel Krim. He was also responsible for placing General Sanjurjo in Melilla. In *En alas de la gloria* (1926), a historical documentary of the first transatlantic flight by seaplane, the male "lead" is Ramón Franco, the younger brother of Francisco Franco, who pilots the Dornier Do J Plus Ultra on January 26, 1926. Ramón Franco had made routine reconnaissance flights over Rif enemy territory, earning the reputation as a courageous and daring pilot in the Spanish army in Morocco. In 1924, two years before in the film *En alas*, Ramón Franco had been the first to fly the aerial route from Melilla to the Canary Islands via the northeast cape of Africa.

While Ramón Franco satisfied the collective need for a heroic war aviator, the cult of the aviator hero in Europe and North America, as Michael Paris has shown, had already taken off through the vehicles of novels, pulp magazines and cinema imagery (Paris 5). Where war propaganda began or ended in relationship to cinema's own propagation is hard to say. For instance, figures like Alfonso XIII, a collector of mechanical gadgets and enthusiast of aerial gas bombardment, promoted war for the sake of war. For Alfonso XIII, engaged in what Michael Walzer describes as a tournament between aristocratic men whose best, brightest and mightiest weapons win, war existed for war's sake: it was a disciplined, consensual game of fatal play (Walzer 25).[10] The targets of these war games were, as he called them, "the savages" of northern Morocco.

The same political and socio-economic forces regulated both film and aviation industries. State and private financiers, legislators and insurance companies shared weather predictions

(crucial for either flying or filming), scientific reports and technical manuals, experiments with technology, and inter-technological competition for the conquest of the third dimension. Which technology would secure the confidence of the mass public, cementing an ideology of airmindedness and a white nation of flyers?

Airmindedness vs. Military Needs: *Juan de la Cierva*

In *Juan de la Cierva*, objects and networks begin to blur in response to the rhetoric of airmindedness, the slogan of mass flying, and the demands of the Spanish colony in Africa. As filmic images show, far from being technologically neutral, the Autogiro constituted a dynamic site for the contestation of military and commercial interests. Through the medium of film, the promise of the Autogiro as a domesticated vehicle for urban transit gained a sensational visual perspective. At this same time, cinema maintained its networked complicity with military aviation in its repeated allusions to the Autogiro as a specialized machine for warfare.

What we see as "the movie" of *Juan de la Cierva* is in reality a collection of filmed *actualities* (events filmed as they occurred) that were collapsed into a weekly news compilation: an assemblage of different newsreels, publicity films and filmed public exhibitions about the Autogiro produced between 1923 and 1925. The footage was run together, without reference to individual directors, although the Pathé news company did receive acknowledgment in one of these reels. English was used for some of the intertitles, but the national provenance of the various pieces of footage is hard to assess, nor does examination of the filmic materials reveal at what point these shorts were pasted together into one continuous filmstrip. Their subsequent integration, however, creates cause for reflection. The forced linking of these separate reels, each with its own history, national focus and aesthetic emphasis, was symptomatic of ideas about what film should be: feature-length, coherent and unitary (transparent editing would smooth out film's inherently fragmentary nature); and at this point in time, cosmopolitan instead of nationalistic (although the seeds of nationalism are easily perceived). Like the discourse about the airplane that fetishized it as a coherent object and erased the network in which it was embedded, the filmic medium would cast the plane as a dream of modernity at the expense of its larger socio-cultural constructedness. Twentieth-century archivists of Madrid's Filmoteca internalized this thinking into their classificatory scheme while historians of twentieth century Spanish cinema dutifully transferred the airplane-as-icon into the archive of disciplinary knowledge.

The various pieces of footage are an assemblage of generic instability—is this an advertisement, a documentary, or a heroic narrative about the possibilities of the aircraft, the prowess of the pilot? A nodal point within this object-network that allows for viewing pleasure is the question of who or what comprises the subject of this film: is the subject Juan de la Cierva, after whom the film is titled, or is it his invention, the Autogiro? Viewers of filmed actualities were accustomed to seeing the airman as hero, and every flight as a major triumph for the pilot, the hero of the skies (Paris 19). In *Juan de la Cierva*, however, the attention is not on a particular pilot, but on the inventor's creation, and on various individuals who potentially could all be pilots. The film's focus on the unique Autogiro reflected its contested position within debates over which kind of rotary wing craft (helicopters, gyroplanes, gyrodynes, rotodynes, etc.) should prevail. Helicopters existed at the time, but they were either very complex—requiring nine rotors and propellers—or extremely unstable, like balloons tethered to the ground (Mody 516). De la Cierva was emphatic about the differences between the Autogiro and the helicopter or the airplane. In fact,

> [De la] Cierva saw the autogiro as a kind of airplane with a wing that just happened to move independently of the fuselage, whereas he and other pro-autogiro engineers saw the helicopter as a 'flying machine designed to rise by means of a vertical air screw or propeller.' The autogiro's rotor, unlike the helicopter's, would be unpowered; like a yacht tacking into the wind, it [drew lift from] the relative wind generated by an ordinary airplane propeller mounted on the front of the fuselage by a process called 'autorotation' (hence the name "autogiro"). (De la Cierva and Rose 16)

The Autogiro's free-wheeling rotor, and its ability to maneuver by generating windspeed, made it seem more intuitive than other aircraft. Less experienced pilots could also fly Autogiros more easily, a benefit for those who wished to promote mass flying. The Autogiro was thus unique, offering technical capabilities heretofore unseen. Its aerodynamism, in the opinion of De la Cierva, was far more sophisticated than the skill of any pilot. The filmic display of the Autogiro, especially in the first seven minutes, privileges its maneuverability in a mis-en-scene devoid of human figures. Granting sole agency to the Autogiro, this sequence begins with long and medium shots of the body, then showcases in a close-up the ingenious design of the rotor and the articulated blade, and documents repeated take-offs of the machine.

The different audiences of this film about the Autogiro—the military, the aviation experts and enthusiasts, and cinemagoers (and mixtures of all three)—would read these same images differently. Experts and engineers would focus on the film's shots of the blades that were hinged to the root of the rotor and thus capable of moving freely up and down. This achievement, de la Cierva had hoped, would solve the problems of ascension and propulsion and the gyroscopic force that had complicated take offs (Mody 515, 518). The military was after warcraft that could hover and safely descend vertically. The Autogiro was capable of near-vertical descent but this was reserved for emergency landings or for demonstrations, like the ones in the film. If the Autogiro could perform this, as its supporters claimed it could, other national militaries would invest in the technology. Ultimately the U.S. military, despite showing initial support, would invest in the helicopter, even though helicopter technology was less safe and reliable, and required far more pilot training than the Autogiro.

Film audiences comprised of experts and educated elites who consumed aviation discourse might have viewed what seemed to be fairly vertical dives and landing as images as proving possible the idea of domestic aviation. If these images showed the Autogiro competing with the pilot for symbolic and technological importance, they also demonstrated "airmindedness": that the Autogiro could take off and land in areas of urban congestion, and how it was going to modernize, or whiten, the nation and its citizens, who would consume it as a safe domestic product. The second sequence, for instance, features the indexical trace of humans—row houses in back of the parked Autogiro, a reminder that this strange mechanical creature can be domesticated. Featuring the Autogiro so close to homes promoted the notion that normal people could fly the Autogiro from a private back yard or the roof of a house, just as they would park the car in a garage (Mody 520).

De la Cierva and engineers and businessmen who promoted the Autogiro through both mass media and specialized journals for experts all argued that driving the Autogiro was the same as driving a car. Civilian pilots could go wherever they wanted, unrestrained by train stations and airports as they could learn to read flight instruments and interpret ground signals, thus eliminating the need for ground personnel. Impresarios like Harold Pitcairn, the owner of the commercial sector of De la Cierva's company, even tried to obtain immunity from laws that regulated air flights. The *NY Times* predicted that "the day will come when the Autogiro will be used in the air as the automobile is driven on land" (16 November 1930). Although the Autogiro

never won such popularity, it was used in U.S. cities to fight forest fires; to fight criminals and patrol traffic; to crop dust and chart tree diseases; and to track both game and hunters.

But for businessmen, realizing the symbolic capital of the Autogiro—its appeal as a utopian machine capable of bringing on mass democratic flying—required the Autogiro's conversion into a mass-produced reality. Again, what had to be established in the public mind was the habit of "airmindedness," a term invented by Arthur Blessing, a transportation expert of the twenties. Considering the options for a long-distance journey in the 1920s, Blessing wrote:

> No business can last if it does not at least pay expenses, and capital will not be forthcoming to develop aviation unless there is a reasonable profit in sight eventually. While mail and express can furnish some revenues to the air carriers, passengers must be attracted and held in order that air transportation may compete successfully and provide service. For most persons, Blessing continues, travelling in the air is rather revolutionary and a spirit of "air-mindedness" will have to be fostered; just as we have acquired "automobile-mindedness" and "radio-mindedness." (Blessing 54)[11]

It was forward-thinking to promote the idea of average citizens, women and children as subjects of aviation. Indeed, the fight for the woman's vote was in full swing and figures like Amelia Earhart (who broke an altitude record in an Autogiro during a transcontinental flight) were featured in the press and in some films. Nevertheless Blessing was writing during sanctioned racial segregation. And while cinema captured this same utopian impulse, imagining possibilities for air travel whether they could be fully realized or not, these possibilities were limited to those who fit the mold of the modern white family. As the film *Juan de la Cierva* suggested to some expert audiences, and also perhaps average cinemagoers, the Autogiro could be accessible to the "weekend Autogirists," as they were called in 1931 in *Autogiro News*. The presentation of the all-inclusive nation-family was perfectly suited to this democratic image of the Autogiro. In a major sequence, the film shows a small crowd gathered around the aircraft. De la Cierva himself hoists children up onto the nose where they pose as if for a portrait. Men assist a woman into the cockpit and the plane takes off. Women were not only safe but they could also drive this machine and potentially buy one.

Commercial necessity, of course, was the main incentive for getting the public to think more about air travel, specifically, public or private mass air transport, even though aviation

would not attain a mass commercial profile until after the sixties or even the seventies; until then, airplanes and aircraft remained the exclusive terrain of the financial and military elites. That said, aviation entered the public imagination through cinema as early as 1901 with the one-minute moving picture (trick photography) that showed a pedal powered airship flying over Paris in *A la Conquête de l'Air* (*The Flying Machine*, dir. Ferdinand Zecca, 1901). The successful flights of the Wright brothers and Count von Zeppelin, the first flyers' convocation, and Bleriot's flight across the English Channel in 1908 were testimony that the air age had begun. Film reflected this reality through shorts about "flying machines" that evolved into narrative-length comedies and dramas using airplanes in chase scenes with trick photography and elaborate sets (Paris 11-12; 19). After 1914, as Michael Paris writes of British aviation films before the twenties, "film accentuated the dramatic and dangerous aspects of flying and, by implication, elevated the airman to heroic status—a man who continuously risked his life as he struggled with nature and attempted to develop this new technology" (20). Hero narratives and the thrilling danger of flying sutured white cinema fans into the realm of cinematic aviation.

Unsurprisingly, this merging of cinema and aviation implied competing ideologies. In *Juan de la Cierva*, for instance, there is tension between humans and the impressive aircraft. Cinema pandered to both rhetorics—on the one hand, air travel for everyone (the Autogiro could be operated by lay people), and on the other, the militaristic assumption that only a small elite of highly trained technical experts or pilots should maneuver planes.

In his quest to perfect his Autogiro, de la Cierva had wanted to eliminate the human factor, or human error, to prove that it could maintain stability without being controlled by pilots, whom he considered to be on par with chauffeurs (Mody 515-16). His belief in the superiority of machines over human agency was founded on experience. The tri-motor bomber that de la Cierva had designed in 1919 had tainted his reputation as a competent technological inventor. The crash occurred because the pilot was accustomed to flying smaller planes (Mody 515-516). This accident led him to conceive the Autogiro.

The film record of the Autogiro's capacity to fly at a low altitude without crashing was essential for proving its reliability. In the film *Juan de la Cierva*, after a medium shot of a group including "Captain Courtney, the famous Test Pilot and the inventor" we see an accident: an Autogiro has crashed and rolled over. A crowd gathers around the fallen machine, men lift the craft and set it upright. The machine is intact. This real-time event allows for drama but

reinforces the superiority of the machine, since for de la Cierva, the Autogiro was superior to the man who drove it. Yet this conceit contradicted how Spanish and American experts and engineers felt about it. Up to this point, interest in Autogiro technology had been limited to American businessmen. But the Spanish military's propaganda campaign for colonialist war in Africa would raise the profile of the triumphant white airman.

If air vehicles could be piloted by anyone, if there could be Model Ts of the sky—to borrow the vernacular of mass flight—air travel could transcend social divisions. The airplane, however, would follow a different international destiny. The military and its experts employed the airplane to improve troop morale, and to reinforce racial and national consciousness, not only only in Germany or in the U.S. but also in Spain. As Navas Pagán confirms in the Spanish military journal, *Militaria*, "La aparición de los aeroplanos levanta el ánimo y el entusiasmo de los soldados españoles y alegra sus espíritus" (64). Seen as heroes, "Estos caballeros del aire," he says, "llevan a cabo una relevante misión psicológica con su habitual intrepidez y vuelos rasantes 'a la española', que asombran tanto a propios como a enemigos" (68). Referring to the war with Morroco as "la larga y penosa guerra que sostuvo nuestra Patria para pacificar el Norte de África (territorio que nos había sido cedido en calidad de Protectorado por la Conferencia Internacional de Algeciras de 1906)" (61), he explains, contrary to fact, that Spain had debuted the airplane as a war weapon:

> En esta Guerra del Norte de África está madurando extraordinariamente la joven aviación militar española, a base de espíritu de sacrificio y de abnegación, sereno valor, disciplina y excelente técnica sin faltar en grandes dosis las proverbiales furia y audacia hispánicas. El rápido proceso de desarrollo de la aviación military española en la campaña de África y las muchas enseñanzas de sus expertos y hábiles pilotos cautivan pronto la atención de las aeronáuticas europeas en unos momentos de grandes tensiones internacionales. No poco han aprendido estas aviaciones de los ejemplos y orientaciones que está dando la hispana, que ha sido la pionera en emplear el aeroplano como eficaz arma de combate. (Las Navas Pagán 65)

For both the army and for proponents of mass flight, aircraft displayed a vast potential. The ability of an air machine to land on a rooftop, for instance, was a valuable practical maneuver, and midway through *Juan de la Cierva* we see the Autogiro ascending and apparently remaining

immobile in the air. An intertitle appears: "It can hover and land almost like a bird!" But could it? Mody admits that "It is necessary here to confront the realist criticism that perhaps, hovering 'really was' required for the military's needs, and that the helicopter 'really was' the only vehicle that could supply it" (533). By 1959 the US Armed Forces was insisting that rotary aircraft must hover—and this would ultimately decide which technology would get funding from either the military, academia, civilians or the industry (Mody 534).

Flying quickly prompted Western national militaries around the globe to restructure, and the Spanish military followed suit: flying would change the Spanish military strategy in Morroco to one that was more lethal, stealth, and covert. Airplanes enabled reconnaissance in the mountainous terrain of the Rif, which was difficult to traverse either by automobile or on foot. Planes made it possible to drop supplies, and even more importantly, to drop bombs. In the twenties, during bombing runs, the pilot himself had to take in his hands a bomb full of mustard gas and drop it from the plane (Balfour 134; 141-42). It was also necessary to fly at a low altitude at daybreak or even at night in order to avoid the muhayeddin snipers, since sixty percent of downed Spanish planes were caused by these shots (Balfour 134; Navas Pagán 70). The Spanish colonialist army was keen to avoid losing soldiers to mustard gas. But with planes soldiers could avoid exposure to towns and market places that had been contaminated by gas.

The enormous threat to military pilots, who were primary targets, was mitigated by tales—and films—that exalted the bravery and audacity of these aviators in these kamikaze runs. The argument for greater human agency in aviation thus supported and even mythified these men, who as Navas Pagán says, went to "pacify North Africa" (61). According to Alfonso XIII in 1925, "lo importante era la exterminación de las bestias maliciosas, las tribus más aliadas a Abdel Krim" (Balfour 135). The rhetoric of a new *conquista* seem to justify racist genocide—Primo de Rivera had compared the war in Morocco with the spiritual conquest of the pagans of the Americas (Balfour 117)—and it placed the "caballero del aire" at the head of this "new" white crusade.

Conclusion

Planes and cinema were neither symptoms of modernity, nor material reflections of an economic model. But the fusion of airplane and cinema did project a racialized modernity and exercised a true political function, their technical developments supporting hierarchies of power and social

relations. By decentering the naturalized categories through which we have understood cinema and airplanes—cinema has taught us a mediated vision and renders this natural—we can discern the linked circuitry of racialized thought, airmindeness, and the pleasure/anxiety of aviation.

Flight on film or films about flight shown in Spain almost exclusively celebrated the individual as agent, masculine, and in control of his own mobility, even while anxiety about air travel accompanied the spectator-passengers of these films. Some of this anxiety lay in the excitement of the ride, the thrill of a bird's eye view, the rush of adrenaline stoked by intertitles. And some anxiety bespoke an unspeakable terror of the other—an Other in the form of irrational fear before the spector of violence and pain wrought by an accident; or in the form of a racialized, unknown ethnic other, an after-image of the devastation of innocent people. Cinema masked and distracted spectators from the destructive features of technology even while they watched its deathly force on film. When specatators no longer saw its larger context, (the networks of actors, objects, and discourses that irremediably structured, defined and created cinema and the cultural reality that it reflected), their vision had merged with the line of aim. Deconstructing the apparent autonomy of these organizational categories of modernity can help to shed light on the forms of knowledge that covertly naturalize geopolitical divisions and racist violence.

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Notes

[1] In particular, *Misterio en la puerta del sol* (Francisco Elías 1927), which contains an eleven-minute airplane ride sequence.

[2] In Madrid's Filmoteca these short films are categorized as *Juan de la Cierva.*

[3] For analyses of Spanish images and films on northern Morocco and the colonial war see: Eloy Martín Corrales, *La imagen del magrebí en España: Una Perspectiva histórica, siglos XVI-XX*, Barcelona: Bellaterra, 2002; Alberto Elena, *La llamada de África: Estudios sobre el cine colonial español*. Barcelona: Bellaterra, 2010; and María Dolores F. Fígares Romero de la Cruz, *La colonización del imaginario. Imágenes de África*. Diputación de Granada, 2003; and the essential Susan Martin-Márquez, *Disorientations: Spanish Colonialism in Africa and the Performance of Identity*, New Haven and London: Yale University Press, 2008.

[4] See also Paul Starr, *The Creation of the Media: Political Origins of Modern Communication*. Basic Books, 2005.

[5] By rhetorical repertoire I mean "patterned ways of representing the world through discourse . . . that actors can deploy to advance their interpretation or to seal up formally contradictory facets of those interpretations" (Mody 515).

[6] See Friedrich Kittler, 1996.

[7] La "Escuela Práctica de Aerostación, or the School for Balloonists, was established in Guadalajara in 1896 by Pedro Vives y Vich and the Aeroclub of Madrid in 1905. In 1911 in Cuatro Vientos, on the outskirts of Madrid, the school for military pilots was inaugurated. 1911 saw the first Spanish aerodromes, one in Cuatro Vientos and another in Melilla, which anticipated the centrality of aeronautical armaments in the campaign of shock and awe that was unleashed to avenge the disaster of Anual in 1921 (Balfour 139-53).

[8] One of the few photos depicting Federico García Lorca and Luis Buñuel together shows them sitting in a cardboard plane as if they were on a fair ride.

[9] Thanks to Román Gubern for pointing this out.

[10] Thanks to Timothy McCormick (Vassar, 2013).

[11] For more on aeromobility see John Urry, 136-37.

Works Cited

Balfour, Sebastian. *Deadly Embrace*. Oxford University Press, 2002.

Blessing, Aurthur. "Airplanes vs. Airpships." *The North American Review*, Vol. 226, No.1, 1928, pp. 53-63.

Callon, Michael and John Law. "After the Individual in Society: Lessons on Collectivity from Science, Technology and Society." *The Canadian Journal of Sociology/Cahiers Canadiens de Sociologie*, Vol. 22, No. 2, 1997, pp. 165-82.

Corella Lacasa, Miguel. "Ernesto Giménez Caballero, o la estetización de la política." *Res Pública*, Vol. 6, 2000, pp. 57-70.

Dalle Vache, Angela. "Femininity in Flight: Androgeny and Gynandry in Early Silent Italian Cinema." *A Feminist Reader in Early Cinema*, Eds. Jennifer M. Beane and Diane Negra. Duke University Press, 2002, pp. 444-75.

De la Cierva, Juan and Don Rose**.** *Wings of Tomorrow: The Story of the Autogiro*. Brewer, Warren and Putnam, 1931.

Dyer, Richard. *White*. Routledge, 1997.

Ginger, Andrew. "Space, Time, Desire, and the Atlantic in Three Spanish Films of the 1920s." *Hispanic Research Journal*, Vol. 8, No. 1, 2007, pp. 69–78.

Gubern, Román. *Benito Perojo: pionerismo y supervivencia*. Instituto de la Cinematografía y las de las Artes Audiovisuales, Ministerio de Cultura, 1994.

---. *Proyector de Luna*. La generación del 27 y el cine. Barcelona: Anagrama, 1999.

Kern, Stephen. *The culture of Time and Space 1880-1918*. Harvard University Press, 1983.

King, Rob. "'Uproaroarious Inventions' The Keystone Film Company, Modernity, and the Art of the Motor." *Film History*, Vol. 19, 2007, pp. 271-91.

Kittler, Friedrich. *Gramophone, Film, Typewriter*. Trans. Geoffrey Winthrrop-Young and Michael Wutz. Stanford University Press, 1996.

Las Navas Pagán, Ángel Gabriel. "La Aviación Española en la Campaña Militar de Marruecos." *Revista de Cultura Militar*, Vol. 3, 1991, pp. 61-72.

Lyons, David. *Surveillance After Snowden*. Kindle, Polity, 2015.

Mody, Cyrus C. M. "'A New Way of Flying:' Difference, Rhetoric and the Autogiro in Interwar Aviation." *Social Studies of Science*, Vol. 3, No. 4, 2000, pp. 513-43.

Paris, Michael. *From the Wright Brothers to Top Gun*. Manchester University Press, 1995.

Schivelbusch, Wolfgang. *The Railway Journey: The Industrializatio of Time and Space in the 19th Century*. The University of California Press, 1986.

Urry, John. *Mobilities*. Polity, 2007.

Virilio, Paul. *War and Cinema*: *The Logistics of Perception*. Trans. Patrick Camiller.Verso, 1989.

---. *The Vision Machine*. Trans. Julie Rose. Indiana University Press, 1994.

Wajcman, Judy. *Technofeminism*. Polity, 2004.

Walzer, Michael. *Just and unjust wars: a moral argument with historical illustrations*. Basic Books, 2006.