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# The mapping of '500 Days of Summer': A processual approach to cinematic cartography

## Chris Lukinbeal

## Introduction

Film, media, and visual culture's spatial turn has kindled interest in the relationship between cartography and cinema. This growing body of literature has emphasised the similarities between the mediums as well as how cartography and cinema may be productively combined. Castro describes this as cinema's 'mapping impulse', while Bruno calls cinema our 'modern cartography', a 'haptic way of site-seeing that turns pictures into an architecture'.[1] While cinema and cartography have many similarities, they are also vastly different. The difference lies in what constitutes the cartographic paradox:[2] two mutually-related scopic regimes which informed each other's development during the European Renaissance. The first is projectionism, or cartography's objective view from above, and the second is perspectivalism, or linear perspective and the subjective view from below. One area of inquiry in cinematic cartography taken up in this paper is how to conceptualise new representational spaces that embrace this paradox.

In this paper, I engage cinematic cartography through mapping *500 Days of Summer* (2009). Critical cartography has criticised the epistemological focus in cartography on communication by arguing for a performative turn, one that emphasises the iterative practices of production and consumption. I first begin by addressing cinematic cartography in film studies as well as in cartographic science. Then, I draw from de Certeau's[3] two modes of spatial narration, the map and the tour, as a basis through which to engage *500 Days*

*of Summer*. Where the map represents projectionism's view from above, the tour embodies the subjective view from below. Architecture and the mapping production process provide the thematic premise through which to tour *500 Days of Summer*. In contrast, a map of filmed locations provides the basis to engage the geographies of the masculine gaze and millennial demography. Finally, I embrace the cartographic paradox through presenting a cartographic tour of *500 Days of Summer*. This three-part affective geovisualisation offers an example of how cartography can be put into practice to map cinematic space.

## Cinematic cartography

Hallam and Roberts laud the use of GIS as a means to turn away from textual analysis, which has dominated film studies.[4] To this end, they state, 'what is needed … is a critical mapping of the multifarious spatialities of film on the one hand, and the expressly visual cultures of geography and cartography on the other'.[5] However, Avezzù cautions against an uncritical deployment of a cartographic paradigm in film studies. He points to the underlying anxiety that comes with Cartesian logic and how this limits knowledge building and extends and proliferates the crisis of cartographic reason.[6] While cinema and cartography may seem an odd pairing, there is a logical connection to make given that both have the ability to stitch together and visualise space, place, and meaning. Castro used the phrase 'mapping impulse' to reference cinema's 'particular way of seeing and looking at the world, a visual regime'.[7] Castro argues that a mapping impulse enveloped early cinematography through its use of various cartographic shapes like panoramas, atlases, and aerial views. For Bruno, cinema offers 'both an instrument and a route' that redefines cartography as 'its map of fragmentary e-movements opened the way to a new geographical imagination of temporal traces'.[8] While cartography defines a location in absolute terms, cinema is a 'mobile map', a 'complex tour of identifications – an actual means of exploration: at once a housing for and a tour of our narrative and our geography'.[9]

Conley argues that in a broad sense films can be understood as maps in that they are involved with locational imaging, or the representational practice that situates the viewing subject within the places they represent.[10] Cartography and cinema are both practices that involve the production, style, and aesthetics of authorship, one the one hand, and the perception, cogni-

tion, and valuation of representations for the viewer, on the other. The language of maps and films are paradoxically similar and vastly different. Whereas a map requires objects in space to be understood by their relation to other objects, film, Conley argues, develops a topology of image facts that behave like islands of meaning linked together by a narrative flow.[11] Key to the concept of image fact is establishing shots. Establishing shots contextualise image facts, creating a topology of places, events, and spectacles that constitute the film's map.

From a cartographic science perspective, Caquard and Taylor argue that while there has been 'substantial use of cartography in cinema', the impact of cinema on cartography has been minimal.[12] For them, interests in cinema should focus on moving cartographic theory and practice forward, particularly in relation to animated and dynamic maps and the role of emotion and memory in mapping. While cartography removes the subjective position and frequently denarrativises place,[13] cinema preserves the subjective position and seeks narrative unity through a fragmented collection of image-events.[14] What Caquard and Taylor find compelling is that combining cinema with cartography affords the opportunity to rehumanise the map.[15] Cartwright offers one way in which to re-narrativise the map, by using the metaphor of theatre as a framing device to tell spatial stories.[16] The highly structured space of theatrical narration and the three-act play provide a useful starting point from which to engage mapping. Joliveau by contrast argues that geospatial technologies are essential to tourists because they provide semiautomatic indexicality.[17] Academics and everyday people are mapping the indexicality between fictional places in films and real life.

Movie fans the world over have been charting, plotting, and sharing their maps and film locations for quite some time. The internet is full of sites like locationshub.com, movie-map.com, moviemaps.org, movie-locations.com, and many more. These neogeographers seek to engage enthusiasm through putting motion pictures back into places. National film institutes and academics have endeavoured to provide web maps of cinematic places in Australia, Britain, Canada, Denmark, the Netherlands, and Spain. In contrast, Degraff and Jameson provide an artistic interpretation of cinematic cartography through detailed illustrations of the narrative flow of movies like *Star Wars* (1977), *Indiana Jones* (1981), *Back to the Future* (1985), and *Jaws* (1975).[18] They see cinematic cartography as a 'nostalgia for the reality in which we viewed those films' and hope their maps 'are pathways back to those moments'.[19] Cinematic cartography for them is immersive memory maps and

emotional reengagements with the film. In contrast, the Mapping Cinematographic Territories project creates models through which to represent the complex relationships between fictional narratives and the referential world. Caquard and Fiset describe this project as a conversion of narratives into data structures based on action, duration, type, and connection, for display on a web map.[20] They emphasise the process through which this conversion takes place as well as the accurate registration of fictional locations.

Whereas interest in cinematic cartography has focused on cross-disciplinary theoretical developments and applying spatial analysis to film, the epistemologies behind the mapping processes are not emphasised. Critical cartography has shown that maps as representations are social constructions that are wrongly afforded ontological security. In the 1980-1990s Harley called for an epistemological shift in how we understand and ascribe meaning to maps. Rather than begin with maps as scientific, objective documents of knowledge they should be viewed as a means through which hegemonies of power-knowledge are 'engineered, reified and legitimated in the map by means of cartographic signs'.[21] Since this cultural turn an interest in post-representational cartography, or a processual understanding of maps has arisen.[22] The idea here is that rather than maps as inscriptions, the focus is on understanding the process of mapmaking and the role of maps in everyday life. Maps are never finished products but always in the process of becoming; they are by nature ontogenetic. An ontogenetic perspective positions maps as a 'co-constitutive production between inscription, individual and world; a production that is constantly in motion, always seeking to appear ontologically secure'.[23] This shift is a movement away from maps as a static end product coded with power relations, ideology, and bias, to one that looks at mapping as an ongoing cultural process. Rather than dismiss maps as (a) vessels through which to transfer spatial knowledge or (b) reinforce power relations, the ontogenetic perspective views both perspectives as constitutively inside the ontogenesis of mapping. Cartography is, therefore, 'both representations and practices (read: performances) simultaneously'.[24]

De Certeau describes two modes of spatial narration: the map and the tour.[25] With the former, one is seeing and ordering places from above; with the latter one is narrating the embodied practice of going and doing. Where seeing from above is associated with maps as representations, the embodied going and doing is about practice and touring. Moreover, a focus on the practice of map production 'gets at issues around the translation of tangible urban topography into the film medium'.[26] It does so through the use of image

facts that are derived from filmed locations, and then those image facts are stitched into a topology to produce a unified narrative space that structures the cinematic landscape. For cartography, topology is the invariance of spatial properties that remain constant when an object undergoes a spatial transformation. In the case of cinema, the spatial transformation revolves around the conversion of filmed locations into narrative space. Topological space carries the quality of propinquity with this conversion and has the 'capacity to dissolve boundaries, to make proximate that which was far away and in doing so not only rearrange our meta-physics or intimacy and distance, but also endanger any and all systems of order that rely upon distinction and separation'.[27] Cinematic topologies are discovered through the mapping process and through touring filmed locations.

## Touring *500 Days of Summer*

Touring requires 'movement through space, where subjectivity, experience, emotions, knowledge, and valuation of the traveller plays a central role.'[28] Every Saturday at Pershing Square something extraordinary happens that runs counter to Los Angeles' horizontal-autopia reputation: architectural walking tours. Hosted by the LA Conservancy, tours traverse the historic downtown, Broadway Theatre District, and surrounding environs. Los Angeles is 'the city that American intellectuals love to hate',[29] and emblematic of the fragmented dis-located postmodern cityscape embodied by the architectural conundrum of its Westin Bonaventure.[30] Where Chicago reflects the old school of American urban studies with staid patterns of concentric-rings, Los Angeles is keno capitalism laid out on a grid, a 'non-contiguous collage of parcelized, consumption-oriented landscapes devoid of conventional centers'.[31] Part of Los Angeles' postmodern urban form is its downtown architectural palimpsest history. The downtown area's early modern architecture on display through the LA Conservancy tours provides the aesthetic for *500 Days of Summer*, and includes Romanesque revival (the Bradbury Building, though with a Victorian interior), the ornamental Beaux Arts (Tom's favourite, the Continental Building), and elegant Art Deco (Eastern Columbia Lofts). More likely to be portrayed as some other American city, downtown Los Angeles is the original cinematic else-where and else-when.

*500 Days of Summer* is a cult classic romantic comedy, featuring the manic-pixie-dream-girl Zooey Deschanel as Summer and Joseph Gordon-Levitt as

Tom, the millennial-hipster-hopeless-romantic-aspiring-architect. The film was initially set in San Francisco; however, that changed when Joseph Gordon-Levitt and Director Marc Webb happened to take one of those Saturday morning LA Conservancy walking tours, and the script was re-written for downtown Los Angeles. The locations chosen for the film were so impressive that Location Manager Michael Chickey won the California On Location Award for features in 2009. The impact of the LA Conservancy tour is writ large on the film: historic architecture dominates the film. The centrality of Angels Knoll and its view is emblematic of the storyline: Tom only sees what he wants to see. Tom only sees the historic architectural buildings but not the parking lot which Summer points out to him. Tom is also unable to see beyond his expectations of hopeless romance. The view from Angels Knoll is a veritable who's who of Los Angeles architectural history, including the Continental Building (1903), the Grand Central Market (1917), the Million Dollar Theatre (1918), the Bradbury Building (1893), and the grand art deco pyramid that is City Hall (1928). The film is a tour of Los Angeles' downtown cinematic landscape through a non-linear narrative that disrupts temporality while relying on its architecture to ground its realism.

Data used to map *500 Days of Summer* came from Film L.A., a non-profit agency that issues film permits. The mapping process begins with geocoding, or placing the 54 film permit addresses on a map. One of the first issues that arise in the geocoding process is that data can be flawed because permits do not always align with what is in the film. In *500 Days of Summer*, Ikea of Burbank can be identified but has no film permit record. Locations used in production can also be edited out, which happened to a scene shot at the Grand Central Market. Film permits do not differentiate between interior and exterior shots, which can makes it difficult to recognise a location. A house in San Pedro is assumed to be where Summer grew up, but could not be verified. Permits are issued per day, creating multiple records at sixteen locations. Addresses can be incorrectly entered, with a standard error being incorrect address direction (N, S, E, W). A directional error in the film permits occurred at 104 E 4th Street, where a non-descript glass building can be seen in Google Street View (Figure 1). This location does not fit the architectural aesthetic of the film. 104 W 4th Street, however, is the Barclay Hotel, which doubles as Tom's coffee shop (Figure 2). 54 film permits translated into 29 geocoded locations, and of those 21 were indexically referenced to the film's narrative.

Fig. 1: Non-descript office building at 104 E 4th Street (©Google Street View 2017).



Fig. 2: The Barclay Hotel Lobby viewed through Google Street View (©Google Street View, image by Craig Sauer).

Following the process of geocoding comes ground truthing and indexing. Ground truthing is where the cartographer checks to see if what was placed on the map can be found at that location on the ground. Ground truthing is accomplished by traveling to the location or done remotely through Google Street View. Interior locations were accessed through Google photospheres at the Barclay Hotel and the Redwood Bar and Grill (Fig. 2). Checking temporal change at a filmed location can also be done through Google Street View back to the time *500 Days of Summer* was produced in 2008. Ground truthing is a cartographically motivated tour through the city. The mapping

process offers an extra-textual methodology to explore the film's architecture as well as what was framed out of the mise en scène.

Indexing is the cartographic process of cinematic ground truthing. Indexing is fundamentally about building a topological relationship between a location's form in cinematic and mapped space. Some locations are easier to index than others, in particular locations with high production value and lengthy cinematic resumes. Indexing can be complicated by places doubling for others, like the Barclay Hotel's lobby playing a coffee shop (Fig. 2), or the Point Fermin Lighthouse in San Pedro standing in for a wedding in San Diego.

Though it is easy to recognise locational stars like the Bradbury Building for its role in *Blade Runner* (and 76 other IMDb titles), other locational stars from *500 Days of Summer* include the Quality Café (*Catch Me If You Can* and fifteen other IMDb titles), the Barclay Hotel (*As Good As It Gets* and eleven other IMDb titles), and by far the most used location outside a studio or backlot in LA, Griffith Park (*Rebel Without a Cause* and 720 other IMDb titles). With cinematic topologies created every day in Los Angeles, it may be better to conceive of these topologies as weather patterns that come and go in different neighbourhoods and districts. In Los Angeles, a cinematic front has stalled over Tom's neighbourhood and does not look likely to stop any time soon (Fig. 3). The architectural locations chosen for the production of *500 Days of Summer* may seem idiosyncratic, but in terms of Los Angeles' cinematic space, this film lies in its heartland. The point is that the topologies exposed through indexing do not reside just at locations, or points. Cinematic topologies also spread sequentially down linear paths and diffuse horizontally through and beyond polygons through establishing, panning and tracking, wide angle and deep focus shots.
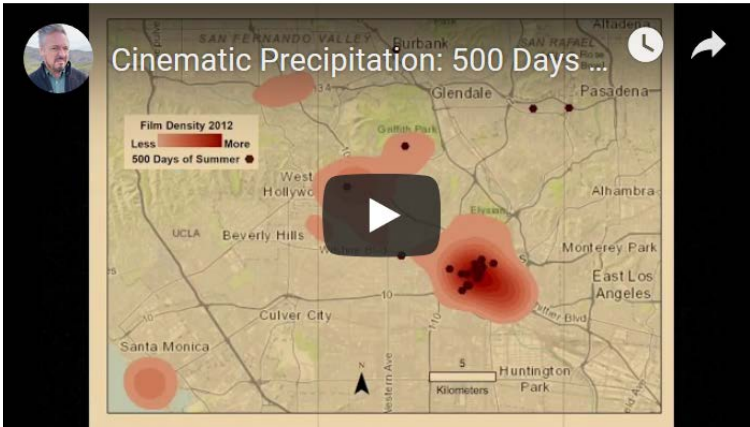
Fig. 3: Animated Map of Cinematic Density in Downtown Los Angeles 2008-2012 (animated map link: https://goo.gl/kE7j3r). Data sources: ESRI, GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, ESRI Japan, ESRI China, swiss topo, OpenStreetMaps, LA County GIS Data Portal; music by Mychael Danna and Rob Simonsen.

Indexing cinematic locations expose how topologies traverse time. Playing the role of Tom and Summer's place of work is the Fenton building, a location with a unique local history. Its fourth floor was once Roseland Roof, a famous taxi-dancehall in the 1930-1950s. During the era of prohibition reformers closed down brothels, and when the jazz age arrived so did dance academies where for one song men could purchase a lesson for ten cents. These lessons were referred to as taxi-dancing, and although the building has been renovated, the neon dancing girls' sign remains (Fig. 4). Tom's favourite location, the park bench at Angels Knoll, is situated between Los Angeles' past and future. The park is bordered by Angels Flight, a century-old funicular that transports people from the top of Bunker Hill to its base at the Grand Central Market. Bunker Hill, once the most fashionable neighbourhood with lavish Victorian homes, later fell on hard times. During the 1930-1950s the Victorians fell into disrepair and became 'pulp fiction's mean streets and film noir's ground zero'.[32] Beginning in 1955, Bunker Hill became the longest redevelopment project in Los Angeles history. Angels Knoll, long slated for redevelopment, was closed in 2013. Handel Architects' $1.2 billion-dollar mixed-use project will completely redesign Angels Knoll while preserving

Angels Flight. Tom's favourite spot will become just another postmodern menagerie in downtown Los Angeles (Fig 5).



Fig. 4: The Fenton Building 1939 and 2017 (©Los Angeles Public Library 1939 and Google Street View 2017).



Fig. 5: Angels Knoll 2018 and its future as Angels Landing (2018 imagery by Google Earth, SIO, US Navy, NGA, GEBCO, LDEO, Landsat, Copernicus; and Angels Landing imagery by Handel Architects).

Through the indexing process, stories about how a film becomes an arena of practice and place-making were uncovered. Film location-based websites are great resources for identifying hard-to-recognise locations. However, most of these websites are just location lists with general descriptions. For more nuanced information about how filmed locations are toured and practiced, film buffs fill the void. Take Ila Fox, a Zooey Deschanel look-a-like, who created the 500 Days of Summer Project where she recreates Summer's fashion and re-enacts scenes from the film. Her catalogue of fashion, location, and production design constitute a geography of an enthusiast where she is the

expert of all things Summer. Pablo Valdivia and Nina Mohan's role-playing exploration provides an intimate re-enactment and tour of the events from the movie. Pablo and Nina remind us that place itself is a thrown-together-ness of events, emotions, and entanglements[33] and, in the case of down-town Los Angeles, places have deeply resonantcinematic legacies. Engaged cinematic cartographers are busy making places and memories out of filmed locations. Where Ila, Nina, and Pablo provide nuanced cases of engagement, thousands more leave tender traces on Instagram's locations at the film's em-blematic park bench (Fig. 6).
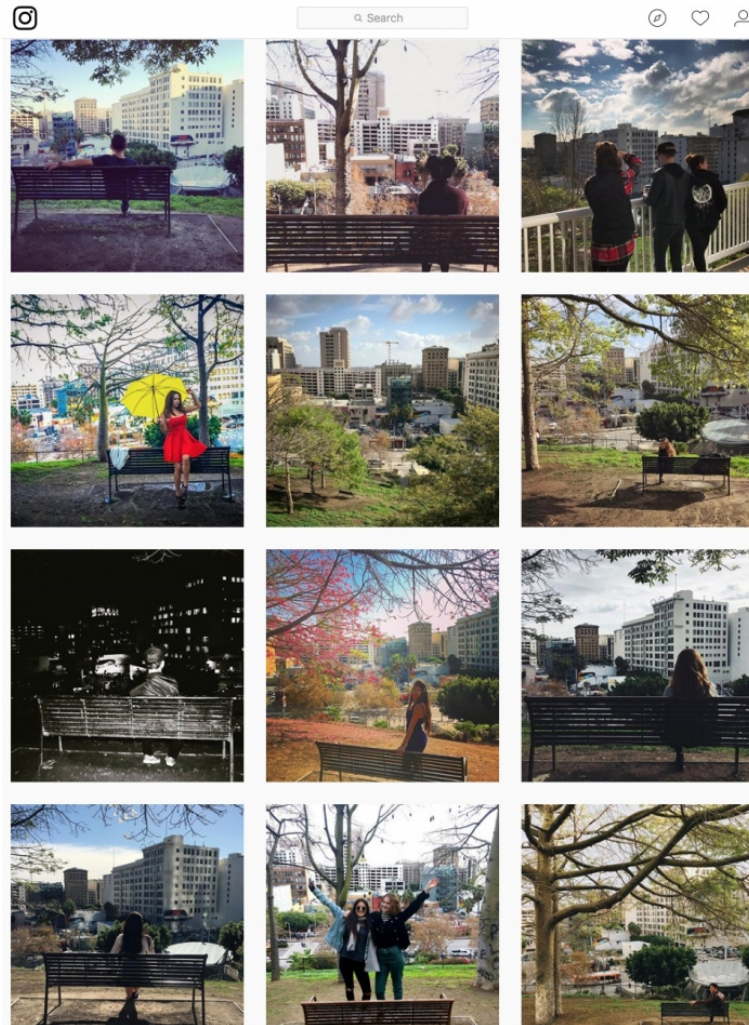


Fig. 6: Instagram Locations: (500) Days of Summer bench.

Engagement with a film's location is a topophilic expression, 'a means of self-discovery',[34] an emotional remapping of the 'pathways back to those moments' when the film was first watched.[35] Topophilia is a part of the place-making activities individuals engage in on the cinematic streets of Los Angeles. Like many films, *500 Days of Summer*, is a topophilic expression where the 'film seems almost entirely an excuse to construct an architectonic view in motion of the city and its surroundings'.[36] These mapping impulses are a reciprocal relationship between us and the environment, a movement through self and space. Indexing involves strolling down the paths produced by film viewers on their inferential walks and verisimilar activities that produce palimpsest urban cinematographies.

## Mapping *500 Days of Summer*

A cartographical analysis of a film has two foci: it can situate film within an era and place; it can accentuate and sharpen textual analysis. In figure 7 the map of *500 Days of Summer* presents film locations organised by the spatial domain of characters and two pivotal events. A majority of the filmed locations are in downtown where Tom lives and works. This love story is reflective of the era and place of the millennial generation within the urban core of Los Angeles and epitomises the idea of the 'millennial city'.[37] A generational analysis is based on the idea that a cohort, in this case those born between 1981-1996, share similar social characteristics that can be reflective of the social geography in a city.

An analysis of Tom's neighbourhood was conducted using ESRI's tapestry segmentation data, which classifies neighbourhoods by 68 unique socioeconomic characteristics. Tom's neighbourhood is emblematic of millennials and is classified as 'metro renters'. This neighbourhood is characterised by highly mobile, well-educated single people in their late twenties and thirties who spend a large part of their money on clothes, rent, and technology. Metro renters live close to work, use public transportation, are interested in the fine arts, strive to be sophisticated, take risks, work long hours, and are focused on social status. Metro renters also enjoy bars, restaurants, yoga, shop at Whole Foods, The Gap, and Banana Republic. Tom's spatial domain is suitable for pedestrian living, with the furthest distance between locations being one-and-a-half kilometres from his work to the Civic Centre. Tom's down-

town area is comprised of the two zip codes that experienced the largest influx of millennials from 2011-2016. The two zip codes are also ranked amongst the most gentrified in the country since 2000.[38]

Summer's apartment is one block from the high rises on Wilshire Boulevard in the densely-populated Koreatown. It is a five-and-a-half-kilometre commute to the Fenton Building for Summer. Given that Summer is a millennial she probably takes the subway from the Wilshire / Normandie station to Pershing Square and walks for a 30-minute commute. Pershing Square is also just one block from Angels Knoll. Rachel's neighbourhood of Eagle Rock is well-suited for the overall millennial atmosphere of the film as well. Where else would Tom have grown-up but in the neighbourhood *LA Weekly* declared 'on hipster overload'?[39] Eagle Rock's main thoroughfare, York Boulevard, was designated by *Conde Nast Traveler* as 'LA's Coolest Street'.[40] With a median age of 35, this gentrified central-city neighbourhood is unaffordable for most middle-class Americans. Rachel's average American-sized home is estimated by Zillow.com to cost $1,501,939, while the US median home price was $368,500.[41]
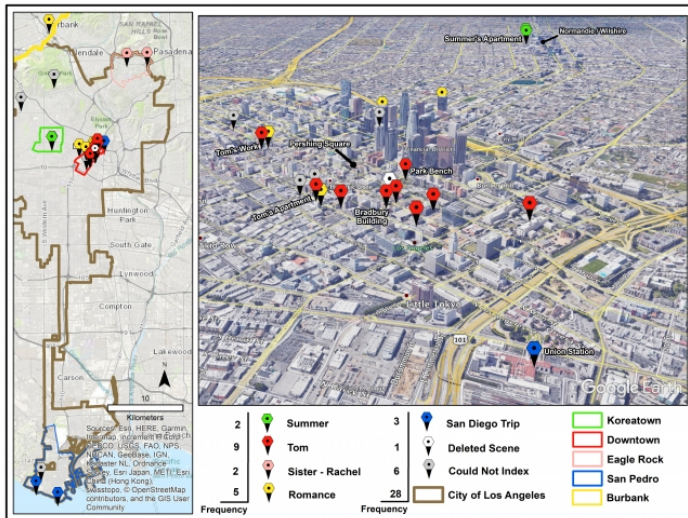


Fig. 7: Map of 500 Days of Summer.

A cartographic analysis of the characters and narrative activity reveals how the masculine gaze of the protagonist/Director/viewers becomes territorialised. Here, the hegemony of the male gaze is socially and spatially reproduced through Tom, who commands the stage and narrative action.[42] The

male protagonist/Director/viewers also command the axis mundi of the film: the park bench. The park bench approximates the centre of the narrative's geography by providing the image fact for the opening and closing scenes of the film. The park bench also approximates the centre of all film production, thus reaffirming the masculine gaze in the formation of the film's cinematic landscape. Further, the female other, Summer and Rachel, serve as *Constitutive Dependents* for the masculine Dominant, Tom, and thus are spatially positioned outside his domain and only engaged/viewed/framed to advance his narrative.[43] The density of filmed locations in downtown shows the spatial dominance of Tom's positionality in the narrative. Even the romantic jaunts occur in Tom's domain, with the lone exception being to Ikea in Burbank. Tom's failure to win the girl in his spatial domain is part of the twist of this otherwise standard 'boy meets girl' storyline. However, a happy ending must meet the approval of the male gaze: Tom meets Autumn within his domain at the Bradbury Building in the epilogue. The connotative play of female-as-season – from Summer to Autumn – reaffirms the masculine Dominant and its subordination of the feminine other to a transitory state.

## A cartography tour of *500 Days of Summer*

Aitken and Craine argue that cartography should draw from cinema's language to produce affective geovisualisations.[44] The International Cartographic Association defines geovisualisation as 'approaches from visualization (ViSC), exploratory data analysis (EDA), and geographic information systems (GISystems) to provide theory, methods and tools for visual exploration, analysis, synthesis, and presentation of geospatial data'.[45] An affective geovisualisation, by contrast, is one that elicits and visualises '"affective meaning" – the perceptions, interpretations, and expectations one ascribes to a specific topological and social setting'.[46] Cinematic cartographies as affective geovisualisations embrace points as relational topologies, lines as projectiles of flight, and spaces warped by narrative engagement. Spatial topologies, in general, are built on structures and their ontologies. Cinematic space is structured through narration, focal length, shot scale, and other conventions. Cartography is structured by geometric rules of projection, scale, and other conventions.

An affective geovisualisation for cinematic cartography requires a mobile map that embraces cinema's narration and is grounded by Cartesian space

through indexing. Below a three-act affective geovisualisation of *500 Days of Summer* is presented (Tables 1, 2, 3 and Figures 8, 9, 10). This cartographic tour follows Cartwright's suggestion of using narration as an organisational structure.[47] More specifically, it uses Snyder's *Save the Cat* interpretation of Hollywood's narrative structure.[48] Snyder's highly popular and widely influential book details the structure behind recent Hollywood movies regardless of genre. Snyder details fifteen beats, or critical events, that must occur and when they should occur in a three-act narrative. The fifteen beats are used as temporal markers in the narrative and indexically linked to their location of production.

Using the *Save the Cat* structure provides an ordered sequence through which to narrate the place-based events associated with *500 Days of Summer*. The beat sheet is split into its corresponding three acts. These beats and locations are identified through pop-up windows in the Google Earth fly-through. The pop-up windows reinforce the association between cinema and cartography by stating the beat by name, describing and showing the beat, and referencing its location. The opening and closing image beats provide snapshot views similar to that seen in the film. The projectile path provides a feeling of the propinquity of characters, events, and places whereas the voiceover stitches the beats with their location and narrative event. Through voice, text, and images in motion, this cartographic tour offers an affective geovisualisation of *500 Days of Summer*.
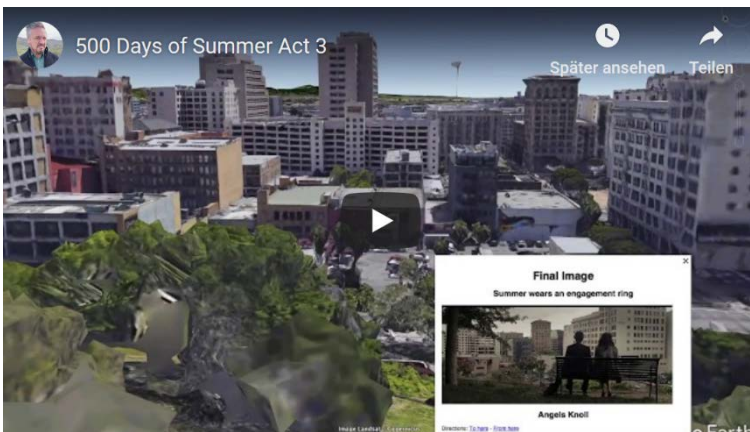


Fig. 8: Act I of 500 Days of Summer (animated map link: https://goo.gl/PiBZL6, Imagery by Google Earth).

Table 1: Act I of *500 Days of Summer*.

| Beat # | Name | Snyder's account of the beat | Location | Narrative Summary |
|---|---|---|---|---|
| 1 | Opening-Image | First impression of what the movie is about. | Angels Knoll | Tom and Summer sit at the park bench at Angels Knoll. |
| 2 | Set-Up | Characters in the A-Story are introduced. | Canadian Building<br><br>Eagle Rock Neighborhood<br><br>San Pedro Neighborhood<br><br>Griffith Park | Tom is at his apartment in crisis over his relationship with Summer. Through a montage we see Summer and Tom growing up very differently. |
| 3 | Theme-Stated | A secondary character states the thematic premise of the movie. | Rachel's House, Eagle Rock Neighborhood | Rachel, 'Just because some stupid girl likes the same stupid music as you doesn't mean she's your soul mate.' |
| 4 | Catalyst | A life-changing moment occurs. | Fenton Building | Tom falls in love with Summer in the elevator at work. |
| 5 | Debate | The hero debates what to do as a result of the life-changing moment. | Barclay Hotel | Will Tom ask Summer out on a date? |

Table 2: Act II of *500 Days of Summer*.

| Beat # | Name | Snyder's account of the beat | Location | Narrative Summary |
|---|---|---|---|---|
| 6 | Break-into-Two | The hero makes a decision, leaves act one, and enters the antithesis of act one, which is act two. | Redwood Bar and Grill | Tom and Summer have drinks which lead to an awkward exchange about whether Tom likes her just as a friend or not. |
| 7 | B-Story | The B-Story gives us a break from the A-Story. | Eagle Rock | Rachel advises Tom about relationships. |
| 8 | Fun-and-Games | This is the 'promise of the premise' where the most entertaining section of the movie appears. | Ikea, Burbank<br><br>San Fernando Building<br><br>Fine Arts Building | Tom and Summer act like a couple and go out on dates. |
| 9 | Midpoint | The stakes are raised, often in either a false victory or false defeat. The Midpoint is the opposite of the All is Lost beat. | Koreatown | Tom spends the night at Summer's where she opens up about her hopes and dreams. |
| 10 | Bad-Guys-Close-In | The bad guys re-group, and the hero's team is now in perfect sync. | Civic Plaza<br><br>Broadway Bar<br><br>Quality Cafe | Tom first dances to his success in getting Summer to love him. Later, Summer tells Tom, 'I think we should stop seeing each other.' |
| 11 | All-is-Lost | Here, we catch a whiff of loss or death as the hero's life descends into shambles. | Million Dollar Theatre | Tom is all alone watching a movie. |

Table 3: Act III of *500 Days of Summer*.

| Beat # | Name | Snyder's account of the beat | Location | Narrative Summary |
|---|---|---|---|---|
| 12 | Dark Night of the Soul | How does the hero feel about what transpired in the All is Lost beat? | Fenton Building<br><br>Quality Cafe | At work, Tom is asked to channel his depression and write grieving cards. Tom goes on a blind date but ends up talking about Summer. |
| 13 | Break-into-Three | The A- and B-Story intertwine, and the hero prevails. | Union Station<br><br>Point Fermin Lighthouse, San Pedro | Tom boards a train to San Diego where he meets Summer. They are both going to attend a co-worker's wedding. Tom and Summer dance at the wedding. |
| 14 | Finale | The story is wrapped up, and lessons are learned. | Koreatown | Tom attends Summer's party where reality does not align with his expectations. |
| 15 | Final Image | Opposite opening image and proof that change has occurred. | Angels Knoll | Tom and Summer at Angels Knoll but this time we know they have separated. |
| 16 | Epilogue | This is not one of Snyder's beats but an add-on to satisfy the masculine gaze. | Bradbury Building | Tom meets Autumn, and she agrees to go on a date. |
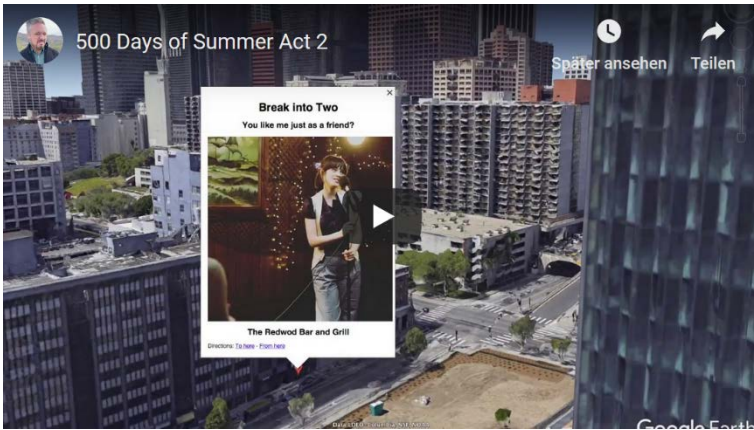
Fig. 9: Act II of 500 Days of Summer (animated map link: https://goo.gl/FM4t42, Imagery by Google Earth).
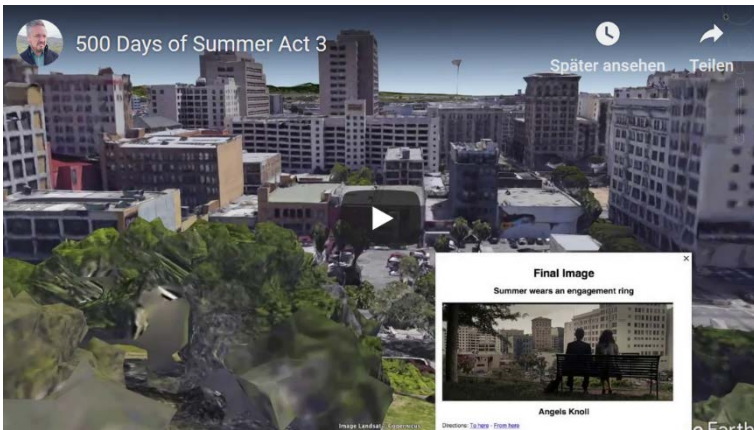


Fig. 10: Act III of 500 Days of Summer (animated map link: https://goo.gl/KWJ2nZ, Imagery by Google Earth).

## Conclusion

Film studies have explored the use of cartographic logic to expand upon theories and methodological practices. In contrast, cartographic science has drawn on film studies to consider how to improve mapping practices related to emotion, affect, and memory. Themes associated with georeferencing and indexing, applications of the narrative structure onto maps, and the production of online cinematic spatial databases have been the prominent outcomes

of putting cinema into cartographic practice. Central processes of cinematic mapping include geocoding, ground truthing, and indexing. Where geocoding is the process of inscribing data onto a map, it is fraught with subjective decisions that determine what will appear on a map. With ground truthing, the cartographer seeks to validate the geocoding process on the surface of the earth. Indexing is cinematic ground truthing. Indexing builds a topological relationship between cinematic and mapped locations based on the image facts presented at a location.

This paper situates cinematic cartography at the intersection of representation and practice, the objective view from above and the subjective view from below. It does so by using the two spatial narrative modalities of the map and the tour to engage in an analysis of *500 Days of Summer*. Through touring, we are actively engaged with going and doing, with the aesthetic ensemble of the locations that underlie a film's geography. Touring positions the spatial narration within a subjective view from below where we are moving within and amongst the filmed locations in their urban context. Touring turns filmed locations into topological places that resonant with meaning, engagement, and purpose. The LA Conservancy now includes its own *500 Days of Summer* architectural tour – but the tour extends to the era of film noir detectives like *Marlowe* (1969) with his lair at the Bradbury building, taxi-dancing at the Fenton Building, and flophouses at Bunker Hill. The tour also extends to the postmodern future that will soon wipe away Angels Knoll, creating the aesthetic for Deckard to roam the city.[49] Topologies expose how cinematic landscapes are ongoing practices of place-making where filmed locations are turned into centres of felt values[50] through playful performances like Ila Fox's 500 Days of Summer Project, or Pablo Valdivia's and Nina Mohan's role-playing exploration of downtown Los Angeles.

Cartography as a mode of inscription removes the performative aspect of the tour. Through an objectified view from above, a cartographic analysis provides a means through which to situate a film as a cultural document reflective of a place and era. *500 Days of Summer* is the millennial's *Annie Hall* (1977), and the film's narrative footprint in Los Angeles offers a case study in millennial urban geography. Cities across the US and world are adept at marketing and creating new urban spaces for this generation by borrowing recipes from planners like Richard Florida. A cartographic analysis also expounds upon the power-knowledge configurations embedded within a film's narrative. The centrality of the masculine gaze in this narrative is enhanced

through cartographic analysis and shows how the gaze becomes territorialised into a gendered logic of dominant and inferior people, places, and activities. A cartographic analysis, therefore, not only enhances and corroborates a textual analysis, it can cross-correlate a film's narrative with other spatiotemporal data.

The affective geovisualisation presented in this paper drew from two modes of spatial narration (the tour and map) to engage the cartographic paradox. This geovisualisation is a tour structured by the narrative beats and Google Earth's three-dimensional modelling of Los Angeles. Whereas *500 Days of Summer* used a non-linear narrative, the cartographic tour reorganises the film into a linear narrative for the sake of clarity. This tour shows scenes from the film's narrative in sequential order and places those scenes within their production location. The production locations and how they are viewed are determined by an objective cartographic view that seeks to re-present them factually as they are in the landscape. However, the movement and narration along the flight path represent the subjective view of the tour.

The cinematic landscape of *500 Days of Summer* resonates with the tasks of film production and tour(ist) consumption.Through touring, we deploy cartography as a verb. This approach incorporates the production and consumption practices that constitute the ongoing formation of the cinematic landscape in *500 Days of Summer*.In contrast, with cartography as a noun, we inscribe meaning onto a representational form. This form is used for situating a film in time and place or to elaborate on the film's textual meaning.Using animated geovisualisation techniques, the cartographic paradox can be engaged through the use of combining the spatial narrative formats of the map and tour.

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## Notes

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[7]   Castro 2009, p. 10.

[8]   Bruno 2002, p. 270.

[9]   Ibid., p. 71.

[10]  Conley 2007.

[11]  Ibid.

[12]  Caquard & Taylor 2009, p. 5.

[13]  Jay 1993.

[14]  Heath 1981.

[15]  Caquard & Taylor 2009, p. 7.

[16]  Cartwright 2009.

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[22]   Caquard 2014.

[23]   Kitchin & Dodge 2007, p. 335.

[24]   Del Casino & Hanna 2006, p. 36.

[25]   de Certeau 1988.

[26]   Arnwine & Lerner 1997, p. 6.

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[28]   Finn & Lukinbeal 2009, p. 128.

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