Why Prytania Jogs at Joseph

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GLANCING AT A MAP of New Orleans, streets seem to emerge from a nebulous mid-crescent origin and radiate outwardly toward the arching Mississippi, like blades in a handheld fan. Viewed from the river, the pattern resembles the skeleton of a sinuous snake. The striking morphology happened neither by chance nor by plan, but rather by the inadvertent momentum that occurs when human beings survey lines upon the landscape and organize lucrative activities therein.

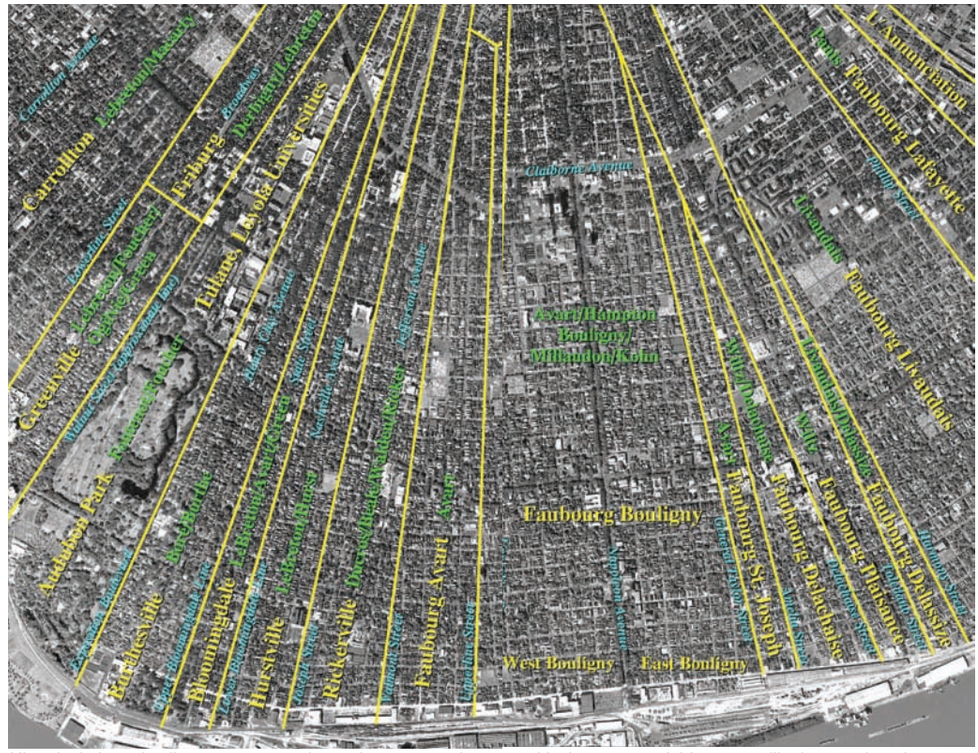
Undergirding the pattern, which appears on the older, riverside half of the city everywhere except the French Quarter, is the "long lot" or *arpent* surveying method introduced by the French in the early 1700s. The system, possibly first used in Babylonian times, appeared in the lowlands and mountain valleys of north-central Europe around the end of the first millennium. It spread to present-day Belgium and northern France in later centuries, where, according to historian Carl J. Ekberg, it formed agrarian landscapes known variously as *en arête de poisson* (herringbone), *village-route* (street-village), or *hameau-allongé* (string town). Whether this "cadastral system" — that is, a procedure of land subdivision and documentation of tenure — derived from tillage practices or from an organized effort of settlement and ownership, the resulting "cadasters" (parcels) were usually shaped as elongated lots with depth-to-width ratios anywhere from 3:1 to 10:1 or more.

Radiating street pattern of uptown New Orleans. Photo courtesy Port of New Orleans

It was primarily the French who transferred this spatial concept to the New World, establishing their long lots in the St. Lawrence Valley, the Detroit region, the Illinois Country around present-day St. Louis, and throughout the alluvial and deltaic regions of Lower Louisiana. The rationale behind the method is compelling: given (1) a valued linear resource at one end (a waterway in our case, else a road), (2) unproductive land at the other end (backswamp here, mountains elsewhere), and (3) an expanse of arable terrain in between (natural levees here, valley bottoms elsewhere), then the optimal way to create a maximum number of parcels that benefit from both resources is to delineate narrow strips *off* the linear resource and *across* the arable terrain. If the lots are too wide, only a few farms would be created. If the lots are demarcated as small squares rather than strips, then numerous lots may be created but many would lack access to the linear resource, for transportation and/or irrigation. Long lots represent an optimal allocation of two scarce resources.

The unit used to measure long lots throughout French America was the *arpent*. This unit emerged as an estimate of the amount of land one farmer can till in one day. Many cultures have equivalent units; in the Spanish-speaking world it's called a *manazana*; in the English-speaking world, an acre. Unlike the *manazana* or acre, however the arpent can be used as a linear measurement (approximately 192 U.S. feet) or an area (192 by 192 feet), depending on context.

The initial years of French imperialism in Louisiana were characterized by a weak and distant authority amid an abundance of land, hence a stable cadastral system did not immediately take form. Instead, vast concessions were made rather liberally by Company officials to wealthy and important colonialists, and most were inconsistently sized and shaped, rarely surveyed, and often used more for timber extraction than for their desired intention: the development of an agricultural economy. But concessions did have some key features that connected them with their ancient antecedents: they were oriented perpendicularly to the river, they extended backward toward the *ciprière* (cypress swamps), and they were generally deeper than they were wide.



Historical plantation lines, surnames of parcel owners, and names of faubourgs, overlaid up a satellite image of modern uptown New Orleans. Analysis and graphic by Richard Campanella.

When the Crown learned of the excessive concessions in Louisiana and worried about their impact on agricultural production, it intervened with a new law. The Edict of October 12, 1716 provided for the return of certain lands to the public domain for distribution to inhabitants "in the proportion of two to four arpents front by forty to sixty in depth." The edict ended the era of vast concessions and formally established the long lot system in Lower Louisiana. As local authority increased, as populations grew, and as the plantation system created new wealth, that system became increasingly codified and documented, with professional surveyors and bureaucrats turning it into a *bona fide* cadastral system. A typical Louisiana long-lot cadaster measured two to eight *arpents de face* (frontage arpents) along the river or its distributaries, and extended forty or eighty arpents (roughly 1.5 or three miles) to the backswamp — that is, across the varying width of natural levees in southern Louisiana. To this day, features such as canals, roads, or levees are often named after the Forty Arpent Line of Eighty Arpent Line.

By the 1720s, most riverine land near New Orleans had been delineated into arpent-based long lots. Straight portions of the river yielded neat rectangular long lots, while curving stretches rendered lots that, like isosceles triangles with their tips cut off, converged on the concave side of the river and diverged on the convex side. Indigo, rice, tobacco and food crops were raised on these early plantations, but following the 1788 Good Friday fire, which charred four-fifths of New Orleans, a new land use seemed viable: urban expansion. Starting with the Gravier family, which subdivided its plantation into Faubourg Ste. Marie (present-day Central Business District) shortly after the conflagration, planters throughout the upper and lower *banlieue* (outskirts) of New Orleans independently contemplated whether they could make more money by continuing in agriculture, or by developing their plantations for residential living.

One by one, over half a century, planters eventually made the decision to develop, and hired engineers and surveyors to design and lay out street grids. Those professionals, of course, had to confine their plats to fit within the limits of their client's property; the upper and lower limits of the long lot thus became the edge streets of the new subdivision, the middle was usually reserved for a grand avenue, and all other spaces became interior blocks.

Where the river ran straight and the abutting plantations constituted elongated rectangles (such as below Elysian Fields Avenue in present-day Bywater and the Lower Ninth Ward), surveyors had no problems fitting orthogonal street networks snugly into the cadaster.

But uptown, where the river meandered broadly, surveyors were forced to squeeze rectilinear grids into cadasters that were shaped like wedges. Slivers and ever-narrowing blocks resulted from the squeezing, and street jars and jogs occurred when one surveyor attempted (or resisted) to align his plat to that which a colleague designed across the property line a year or a decade earlier. This explains why Prytania Street jogs at the Joseph Street intersection, why St. Charles angles at Felicity Street, why Maple Street doesn't quite align with itself on either side of Lowerline — and why Lowerline and Upperline are so named, as they were "lower" and "upper" plantation lines. And why is Lowerline *above* Upperline? Because the former was the downriver property line of a plantation (Macarty) that happened to be upriver from the Bouligny plantation, whose upriver line lent its name to the latter.

The only exceptions to the rule actually validate the rule: when adjacent plantations were purchased and subdivided together, surveyors were free to ignore the now-erased lines which once separated them — and ignore them they did. Case in point: the plantations of Delord-Sarpy and Duplantier, Solet, Robin, and Livaudais, were all purchased, conflated, and subdivided in one fell swoop (1806-1810), obsolescing the lines that once separated them and giving us today's Lower Garden District.

Because of this piecemeal development and the lack of a central planning authority — the city had a chief engineer but no city planning commission until the 1920s — the geometry of the colonial-era arpent system became inadvertently "burned into" the expanding street network of the growing city. Although full housing density would not occur until around 1900, most long lots within the uptown New Orleans crescent had transitioned from plantation to faubourg between 1788 and the Civil War.

It may seem paradoxical that arbitrary and cryptic cadastral patterns often have a greater and longer-lasting impact on cityscapes than massive structures of brick and mortar. But buildings are subject to the elements and the whims of their owners, whereas cadastral systems are inscribed in legal and political realms and root deeply into fundamental national philosophies. Excepting revolutionary changes of government, cadastral patterns usually endure under new administrations and continue their imprint upon the landscape. The French arpent system persisted even when Spanish dominion replaced French, and American replaced the Spanish. Its geometry survived after plantation agriculture gave way to faubourgs, and faubourgs became urban neighborhoods.

The term *arpent* abounds in historical documents of former French colonial regions of North America, and, although largely unknown today in France, it still appears in real estate signs and transactions in rural Louisiana. Long-lot fields and farms, meanwhile, persist in eastern Canada, the Great Lakes region, the central Mississippi Valley, and most conspicuously throughout the Francophone region of Louisiana, where the American cadastral system of township-and-range respectfully left them in place. Urbanization subsumed those agrarian parcels from New Orleans proper, but their ancient geometrical rationale continues to affect the daily life of citizens today — as they negotiate quirky intersections like that of Prytania and Joseph.

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