

War, Peace and Preservation

COMACCHIO'S EEL AND THE SALT WAR OF 1482-1484

Carl Balowski | March 2026

Abstract

This article briefly discusses how the conflict of 1482–1484, conventionally labeled the War of Ferrara, was understood by contemporaries more materially and more accurately as a Guerra del Sale: a Salt War. At the center of that disruptive conflict stood Comacchio, the Este-controlled lagoon town whose eel fisheries, fish-preservation economy, and revived salt potential posed a direct challenge to Venice's long-established monopoly over salt production, distribution, and inland provisioning through the Po Valley. By reconstructing Comacchio's ecology, hydraulic exporation, fishing technologies, and role within the liturgical economy of fasting and abstinence, the study shows that eel and salt were inseparable elements in a wider penitential food system serving courts, monasteries, cities, and inland consumers such as Milan. It further situates the war within the destabilized post-Pazzi balance of Italy, arguing that the Venetian assault on Ferrara converged with the dynastic ambitions of Pope Sixtus IV and Girolamo Riario. The resulting conflict drew in Florence, Milan, Naples, and Ferrara not simply to defend territory, but to resist a restructuring of the peninsula's political and economic equilibrium. The article also places Lorenzo de' Medici's diplomacy, Bernardo Rucellai's embassy, and the military-engineering context of Leonardo da Vinci's arrival in Milan within this same crisis. Read in this light, the Salt War emerges as a struggle over monopoly, sovereignty, provisioning, and the balance of Italy, in which Comacchio's eel-and-salt economy formed one of the conflict's true material cores.

Framing the Conflict

The conflict that convulsed northern Italy between 1482 and 1484 is conventionally labeled the War of Ferrara, yet that title can obscure what contemporaries and near-contemporaries understood with greater material clarity: this was, in a profound sense, a war over salt known as the Salt War. The designation *Guerra del Sale* was not merely picturesque. It reflected the recognition that the struggle centered on the control of a strategic commodity whose importance reached into every layer of late medieval life — food preservation, military provisioning, leather curing, trade taxation, urban subsistence, and state revenue. In this wider system, Comacchio was not peripheral. Long under Ferrarese control and functioning as Ferrara's most lucrative maritime outlet, it stood at the point where lagoon ecology, preserved fish (eel), salt extraction, river transport, and high politics converged. To understand why the war broke out when it did, and why Pope Sixtus IV became so deeply involved, one must recognize Comacchio as a pivotal theater in the wider story.

Salt at the Heart

That wider perspective becomes still clearer when the conflict is set against the fragile equilibrium of late fifteenth-century Italy. After the Peace of Lodi in 1454, the major states of the peninsula — Venice, Milan, Florence, Naples, and the Papacy — attempted to preserve a shifting but recognizable balance of power designed to prevent any one of them from becoming hegemonic. That equilibrium was never serene. It was repeatedly tested by dynastic ambitions, commercial rivalry, and local disputes that threatened to spill beyond their immediate theaters. By the early 1480s the Italian system had already been deeply destabilized by the Pazzi conspiracy of 1478 and the anti-Medicean war that followed. That conflict, incited by Pope Sixtus IV, was not fully extinguished until the end of 1480. In many respects, the War of Ferrara would appear less as an entirely new crisis than as a continuation or reignition of those same hostilities, now redirected through Ferrara, Riario's ambitions, and Venice's renewed mainland aggression after peace with the Ottomans in 1479. The Ferrara crisis therefore did not erupt into a placid political order; it struck a peninsula already taut with recent violence, diplomatic bitterness, and unresolved tensions mostly fueled by the Pope's ambition.

Florence's experience after the Pazzi conspiracy is especially important for understanding why the Salt War quickly became more than a dispute between Venice and Ferrara. The murder of Giuliano de' Medici, the failed attempt on Lorenzo, and the ensuing war were not, from the Florentine perspective, separate episodes, but parts of a single coordinated crisis in which Pope Sixtus IV was deeply complicit —

first in the conspiracy itself, and then in the hostilities launched against Florence and the states aligned with her, including Ferrara and Milan. That papal aggression had nearly broken the republic. Lorenzo's dramatic journey to Naples in 1479 and his successful negotiation with Ferrante I saved Florence, but it also reshaped the diplomatic map. It weakened the anti-Florentine front, exposed the continuing danger of Sixtus's political ambitions, and sharpened Florentine sensitivity to any renewed convergence of papal and Venetian power. When Venice and the papacy moved against Ferrara in May of 1482, Lorenzo could hardly view it as an isolated eastern quarrel. He saw it instead as the reactivation of papal ambition and hostilities that once again threatened to overturn the balance of Italy.

The contemporary nature of the name 'Salt War' can in fact be demonstrated. A Neapolitan archival text datable to 1482–1483, transmitted through later editorial publication, refers explicitly to the conflict as "questa guerra del sale." The transcription appeared in *Rivista delle Biblioteche e degli Archivi* 14–16 (1903), and the notice was subsequently repeated in *Archivio Storico Lombardo* in 1905. Later scholars such as Giuseppe Coniglio and Francesco Storti have accepted the phrase as genuinely contemporary, noting that diplomatic circles in Naples and elsewhere identified the war by its material cause while the fighting was still underway. This matters because it confirms that the salt issue was not merely reconstructed by hindsight. It was recognized by contemporaries as the conflict's defining economic core.

The name matters because fifteenth-century observers understood salt not as a secondary commercial issue but as a matter of political economy in the strongest sense. Before refrigeration, salt-cured fish and meat sustained armies, cities, monasteries, and households through winter and siege. States taxed it because demand was inelastic; merchants fought over it because it made perishable abundance transportable; rulers defended it because it underwrote both subsistence and fiscal power. In Venice above all, the question was not simply who produced salt, but who controlled the channels through which salt reached the inland markets of Lombardy and the Po Valley. The phrase *Guerra del Sale* thus captured, with unusual bluntness, a war fought to preserve a sovereign commercial architecture.

The Ecology of Eels and Salt

Comacchio's importance long predated the war itself. Situated in the marshy, brackish environment of the Po Delta and built across small islands and channels, it occupied one of the most commercially productive liminal spaces in Italy. Long renowned across Europe for its abundant salt and its exceptionally fine eel, the settlement had an ancient history as an emporium of both commodities along the lower Po, and early documentary evidence already associates it with the movement of salt up the river

system into the interior. Long before the fifteenth century, Comacchio's mixture of fisheries and salt production had made it a natural rival to Venetian ambitions along the Adriatic and the riverine arteries feeding the Po Valley (Figure 1). A major synthetic account of Venetian salt history notes that the Lombard capitulary of 715 already recorded Comacchiese boats transporting salt, and that Venice attacked or devastated Comacchio repeatedly in the ninth and tenth centuries, including the great destruction of 932. The implication is clear: Venice recognized very early that control of Adriatic salt and inland distribution could not be secured so long as a delta competitor such as Comacchio remained commercially free.

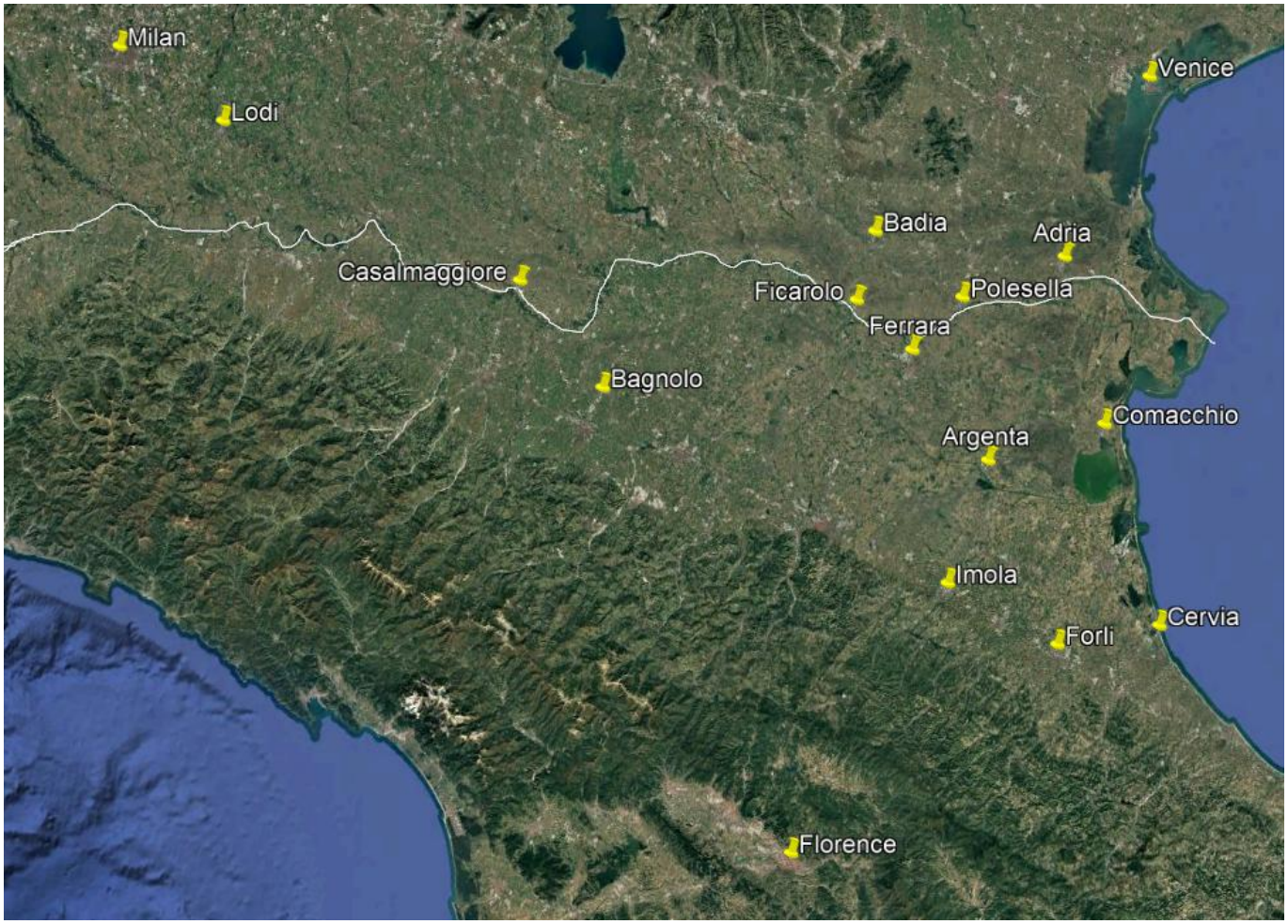


Figure 1

By the fifteenth century Comacchio belonged to the Este dominion and functioned as one of the most distinctive resource zones of the Duchy of Ferrara. Its ecology shaped its economy. The *Valli di Comacchio* — broad expanses of shallow, brackish lagoons, mudflats, canals, and wetlands — were poor

ground for cereal agriculture but extraordinarily rich for fishing and for the creation of salt pans. The result was a highly specialized lagoon economy. Eel was its signature commodity; smelt and other small lagoon fish provided abundant secondary catches; and both depended upon preservation if they were to become durable wealth rather than ephemeral seasonal abundance. Under the Este, Comacchio's marshes were managed not as marginal wasteland but as tightly regulated assets, generating income through fish capture, processing, export, and the policing of access. Eel, especially, became not only the town's leading product but a kind of cultural metonymy for Comacchio itself — an association so enduring that the town remains known for its eel even today.

The Liturgical Economy and the Demand for Lean Foods

That specialization must be set within the liturgical structure of Quattrocento life. In fifteenth-century Italy, food was regulated not only by market availability but by the Church's calendar of fasting and abstinence. Fridays throughout the year were days of meat avoidance; Lent imposed a still stricter regime, often excluding not only flesh but also animal by-products such as eggs, butter, cheese, cream, and milk; Ember Days, vigils, and in many places Wednesdays and Saturdays further enlarged the number of "lean" days. The distinction mattered. Fasting regulated quantity; abstinence regulated kind. Together they generated a massive, recurring demand for proteins that were lawful, portable, and preservable. In precisely that environment, Comacchio's eels and small fish became indispensable.

The religious permissibility of fish also rested on an intellectual and medical framework familiar to Renaissance society. In humoral terms, the flesh of warm-blooded terrestrial animals was "hot" and "moist," stimulating the blood and, by extension, the sexual passions. Fish, by contrast, was classified as "cold" and "wet," and was therefore regarded as better suited to penitential discipline. That distinction helps explain why fish occupied such a privileged place in the economy of abstinence. It also explains why the category could be surprisingly elastic. In medieval and Renaissance usage, the operative distinction often followed habitat and temperament more than modern zoology. Aquatic or semi-aquatic creatures could be admitted into the broad practical class of "fish," so that fasting culture rested not on modern taxonomy but on a flexible blend of theology, natural philosophy, and social convenience.

This is one reason why the language of a "lean economy" is more than metaphor. For elites, preserved fish made possible a luxurious Lenten table without formal violation of the law; for the urban poor, especially during the hungry gap of late winter and early spring, cheap salted or marinated fish could be the difference between observance and hunger. Comacchio's lagoons therefore sustained not merely a local

trade but a religiously structured food system. Its products answered the penitential needs of households, courts, monasteries, and city markets alike.

More concretely, Comacchio was a settlement of thirteen small islands embedded within a wetland system that offered extraordinary productive potential. The surrounding marshes and shallow basins amounted to hundreds of hectares of exploitable lagoon space — roughly six hundred hectares of terrain suited, if properly managed, to salt extraction on a significant scale. That mattered not only because the landscape could yield salt, but because its position within the lower Po system gave Comacchio a strategic advantage Cervia did not possess in the same way: it was exceptionally well placed to move goods inland by river. A revived Comacchio could therefore threaten Venice not merely as another coastal producer, but as a delta node capable of connecting fish, salt, and direct inland distribution in one integrated system.

That point matters because fish and salt were inseparable. In a pre-refrigeration world which promoted the religious consumption of fish, the value of Comacchio's eel and smelt lay not only in catching them but in stabilizing them. Eels had to be roasted, salted, marinated, barreled, and shipped; small fish such as smelt could be fried, pickled, and preserved. Therefore a substantial part of the Ferarrese economy depended on access to preservative salt at scale. Without it, the massive autumn eel harvest would rot before it reached inland markets. The eel therefore stands as more than a culinary emblem: it embodies the fusion of biology, labor, preservation, and trade that made Comacchio strategically important. This is why the question of salt at Comacchio was never a minor customs dispute. It was a question of whether the d'Este of Ferrara could convert the natural wealth of the delta into autonomous economic power.

The processing chain also structured labor and value in specifically commercial terms. Seasonal catches had to be stabilized quickly and in bulk. Eel, the prestige product, could sustain long-distance trade only after roasting or salting and packing; small fish such as smelt acquired exchange value through exactly the same preservative logic, whether pickled, salted, or otherwise prepared for transport. What made the Comacchiese fishery politically consequential, then, was not simply abundance in the lagoons, but the conversion of abundance into durable commodities. Salt was the hinge in that conversion. For the Venetians to restrict or manage access to salt, while Comacchio was abundant in it, was therefore to restrict Ferrara's capacity to monetize the delta itself.

The hydrographic technology behind that monetization deserves emphasis. Comacchio's lagoons were not exploited in a merely opportunistic fashion. They were worked through fixed trapping systems later

known as *lavorieri*, elaborate weirs set in the channels between lagoon and sea that took advantage of migratory behavior. During autumn movements, especially under favorable atmospheric and tidal conditions, fish moving seaward to spawn were directed through successive chambers in which different species could be separated and captured. White fish were intercepted early; eels, more supple and elusive, pushed farther into the trap system until they were enclosed. The effect was to turn the lagoons into a vast managed harvesting apparatus — something close to an extensive form of aquaculture, or *vallicoltura*, rather than a simple natural fishery.

This technical dimension helps explain the scale of Comacchio's productivity. The wider lagoon system in the later Middle Ages and Renaissance was far more extensive than the reduced modern landscape, and its management allowed repeated, predictable extraction with relatively modest labor compared to the volume obtained. Comacchio's wealth thus lay not only in ecology but in engineered ecological control. It was a hydraulic economy, and therefore especially vulnerable to any power, such as Venice, that could seize canals, destroy pans, or interrupt the movement of salt and fish at nodal points.

The integration of religion and production can also be seen in the nearby monastic world. Religious houses in the lower Po region, including great establishments such as Pomposa, participated directly in drainage, hydraulic management, and fish exploitation. The Church, in other words, was not merely the legislator of abstinence; it was embedded in the material economy that abstinence helped sustain. Whether or not one accepts later cynical claims that fasting days multiplied to support fish interests, contemporaries could easily perceive a close connection between penitential law, aquatic provisioning, and profit.

Venice's Salt Monopoly and the Threat of Comacchio

To see why that prospect was so alarming, one must place Comacchio against the larger architecture of Venetian salt policy. Salt was the "white gold" of the preindustrial world, but for Venice it was more than a useful commodity. It was a financial engine. The republic's marshy lagoon environment, poor in arable land and mineral wealth, pushed it from an early period toward maritime extraction and trade. Cassiodorus' famous early-sixth-century letter to the maritime communities of the lagoon already linked Venetian livelihood to saltworks, observing that "all your emulation centers on the saltworks" and that wealth came from them rather than from the plough. Over time Venice moved away from dependence on local production alone and toward mastery of the trade as a whole. By the later thirteenth century the republic had codified the *ordo salis*, compelling merchants to bring salt back to Venice and integrating its

movement into the wider commercial system of the state. Salt was ballast, taxable cargo, a source of profit, and a lever of regional dependence. Within that system, Venice worked deliberately to ensure that Ferrara could not freely exploit the salt pans of Comacchio, despite the town's natural abundance in saline resources. Instead, Ferrara, threatened by Venetian military might, was forced to obtain salt through Venetian-controlled channels, above all from Cervia, thereby making the Este depend for supply upon the very monopoly that was suppressing their own production. The arrangement was economically humiliating as well as politically provocative: Comacchio possessed salt in abundance, yet Ferrara was compelled to purchase from elsewhere under Venetian terms.

The administrative machinery behind the Venetian regime was formidable. Venetian salt policy rested on specialized magistracies and offices charged with supervising procurement, warehousing, quality, taxation, routing, and inland distribution. Salt entered Venice not merely as a market commodity but as a regulated stream whose management underwrote other sectors of the economy. The point bears emphasis: the republic profited less by simply making salt than by positioning itself as the indispensable intermediary through which Adriatic and Mediterranean salt had to pass before reaching the inland markets of Lombardy and the Po Valley. In that sense, Venice's salt order resembled an early mercantile monopoly backed by state logistics, legal coercion, and naval force. The state defended this order with remarkable ruthlessness, using treaty pressure, forced commercial dependency, and, when necessary, direct destruction of rival sites.

By the early 1480s that monopoly was being defended by a republic newly freed for mainland action. The Treaty of Constantinople in 1479 had ended the exhausting Venetian war with the Ottomans and released ships, commanders, credit, and political attention for the *terraferma*. Under Doge Giovanni Mocenigo, the Senate could now look east and south with fewer maritime distractions and with heightened sensitivity to any threat to the fiscal structure that sustained Venetian power. Ercole d'Este's activation of Comacchio's salt potential therefore appeared at the worst possible moment from Venice's perspective. It was not simply a rival production site; it was a rival appearing just when Venice had both the incentive and the means to respond militarily.

That perception explains the intensity of Venetian alarm. If Ferrara could resurrect and increase production at Comacchio, undercut Venetian prices, and exploit the Po system to move salt and its lucrative eel inland without Venetian mediation, then the danger was not local but exemplary. Other inland states might seek analogous evasions. The integrity of the monopoly depended not only on suppressing current leakage but on preventing the demonstration that Venice could be bypassed.

Comacchio, in that sense, was dangerous because not only did it cut into their monopoly, but it also threatened to become a precedent.

That order was administered through institutions such as the *Collegio del Sal* and the *Magistrato al Sal*, Venetian bodies that treated salt not as a routine consumable but as one of the true foundations of the state. The system worked because Venice subsidized carriage, centralized warehousing, and then recaptured value through controlled resale into inland markets. Salt thus became a financial flywheel: merchants arrived with a dense, necessary cargo; the state absorbed and regulated it; and the liquidity generated by that system helped sustain wider Venetian ventures in grain, shipping, and the Levantine trades. The physical infrastructure matched the administrative ambition. Great salt warehouses along the Venetian waterfront stored enormous quantities under close supervision, turning the monopoly into an architectural fact as well as a fiscal one.

Within this system, Cervia and Comacchio occupied opposed positions. Cervia, south of Ravenna, became one of the chief productive pillars of Venetian hegemony. Its famous "sweet salt," prized for relative purity and culinary excellence, helped make it one of the most valuable proximate sources feeding Venetian supply. Venice progressively tightened control over Cervia and in 1463 formally purchased the city and its saltworks, integrating that productive node into its own apparatus. Cervia was, so to speak, the obedient engine of the monopoly. Comacchio (Ferrara) was the opposite: a latent site of rebellion and contraband. It possessed the ecology for extensive salt extraction and sat at the source of the Po's river routes and tributaries capable of bypassing Venetian maritime choke points. If Cervia strengthened the Venetian system, a legitimized Comacchio threatened to puncture it.

Milan, Ferrara, and the Inland Salt Corridors

All of this was sharpened by the existence of a major inland consumer: Milan. The Duchy of Milan was landlocked but not disconnected. Through the Po and the canalized systems feeding the Lombard plain, especially the *navigli*, it was bound to the riverine arteries of northern Italy. For a large urban population living under a dense regime of religious abstinence, the steady supply of "lean" foods was a matter of provisioning as well as preference. Comacchio's fish, especially eel and small preserved species such as *acquadella* or sand-smelt, could move inland in salted, dried, marinated, or barreled form. That trade gave Milan access to lawful protein while reducing dependence on Venetian-controlled channels. This material interest was reinforced by dynastic alignment, for Milan had recently been drawn closer to

Ferrara through the betrothal of Ludovico Sforza to Ercole d'Este's daughter Beatrice, a match that gave the lower Po corridor not only economic but also political significance for the Sforza state.

The distinction between eel and smelt also maps onto the social stratification of the fish trade. Eel, rich and oily, was a prized Lenten food for wealthier households and courtly tables. Small fish such as *acquadella*, by contrast, could be harvested in vast quantities, preserved cheaply, and sold in urban markets to common consumers. Comacchio therefore sustained both the upper and lower ends of the penitential food economy: prestigious eel for refined tables, humble small fish for mass consumption. That dual capacity made it exceptionally valuable as a provisioning center.

The prominence of Comacchio in Milanese culture is also visible in culinary literature. In the later fifteenth century, Maestro Martino's *Libro de arte coquinaria* gave fish preparation a sophistication equal to that of meat cookery, and eel occupies an important place in that world. Techniques such as grilling, frying, and especially acidic preservation in vinegar and spices — the logic later associated with *carpione* — transformed eel from mere necessity into elite cuisine. The point is not only gastronomic. Courtly cooking demonstrates how thoroughly the liturgical discipline of abstaining from meat was absorbed into systems of luxury, trade, and taste. Comacchio's eel could thus serve at once as fasting food, commerce, and status.

Resistance, Contraband, and the Road to Open War

This explains the long, asymmetrical relationship between Venice and Ferrara. Venetian predominance over Ferrara, the routes of the Po, and the saltworks of Comacchio was an old and persistent objective. The pacts governing that predominance dated back centuries, and their humiliating daily embodiment was the *visdomino*, the Venetian resident official in Ferrara. He was not simply a consul for expatriates. He represented Venetian jurisdictional privilege inside Este territory. He watched over Venetian commercial interests, adjudicated certain matters involving Venetian subjects, and stood, in effect, as a permanent reminder that Ferrara did not enjoy full freedom where salt and trade were concerned. For the Este, this presence was a standing affront; for the Ferrarese population, it symbolized economic subordination.

That subordination generated predictable forms of resistance. Ferrarese merchants, boatmen, and consumers did not simply submit to the artificial scarcity imposed by Venice. They cultivated a persistent black market in contraband salt, turning daily commerce into a slow-burning contest over sovereignty. In this respect the *visdomino*'s presence was doubly provocative: he was both the visible sign of Venetian

jurisdiction and the practical enforcer of restrictions that the population had every incentive to evade. Long before open war, then, the lower Po had become a theater of chronic passive aggression, illicit exchange, and escalating resentment.

In the early 15th century, under Borso d'Este, Ferrara had largely managed this imbalance through appeasement. Borso seems to have judged that the duchy's survival required a cautious acceptance of Venetian restrictions, including the sacrifice of Comacchio's salt potential. However in the 1470s, under Ercole I d'Este, the balance shifted. Ercole was more forceful, more assertive of Ferrarese sovereignty, and better placed diplomatically. He had powerful ties and alliances to Naples, Milan and Florence, through Eleonora of Aragon and the betrothal of his daughter Beatrice to Ludovico Sforza in 1480. Feeling less isolated than his predecessor, he moved toward active exploitation of Comacchio's resources. The reopening or intensification of the Comacchio saltworks, together with a flourishing contraband trade in cheaper non-Venetian salt, amounted from Venice's perspective to an existential economic and potential militaristic challenge. This was not merely local smuggling. It was the prospect that Ferrara might use the delta and the Po network to supply inland markets outside Venetian control.

That assertiveness was reinforced by the larger configuration of Italian politics after the Pazzi War. Ercole's marriage to Eleonora of Aragon, daughter of King Ferrante of Naples, linked Ferrara directly to the Neapolitan crown, which had strong reasons of its own to block Venetian expansion down the Adriatic side of the peninsula. Those ties were strengthened still further by the recent history of the Pazzi War itself: Lorenzo de' Medici's courageous journey to Naples had won Ferrante over against Sixtus IV and helped bring that conflict to an end, while Ercole had served as Lorenzo's captain in the struggle against the pope. Florence, though less directly dynastic, was therefore no less invested. Lorenzo understood that Ferrara functioned as an eastern buffer. If Ferrara were broken, partitioned, or subordinated to a papal-Venetian design, the pressure would not stop at the Po Delta. Venice would gain an enlarged mainland position; papal influence would push northward through Riario; and the whole post-Lodi equilibrium would tilt against the Florence-Milan-Naples axis that Lorenzo had labored to preserve after 1479.

This Florentine concern was sharpened by material weakness. The anti-Florentine war that followed the Pazzi conspiracy had strained republican finances and complicated the operation of the Medici Bank, especially in Rome under a hostile pope. Lorenzo therefore had every reason to rely on diplomacy, information, and alliance management rather than on reckless military adventurism. His intelligence network — built through bankers, merchants, correspondents, and political allies — made him acutely

sensitive to signs that the peace was fraying. By late 1481 he could see that Venetian mobilization and Ferrara's salt challenge were converging toward war.

That Milanese connection benefits from chronological precision. Beatrice d'Este was officially betrothed to Ludovico Sforza on 26 April 1480, while the marriage itself would not take place until January 1491. Ercole therefore became Ludovico's future father-in-law. The betrothal already announced a durable Este-Sforza alignment and signaled that Ferrara could expect support, or at least serious political consideration, from Milan in any confrontation that touched the Po basin. The significance of that tie was not merely ceremonial. Ludovico's Milan, like that of his predecessors and rivals within the Sforza system, had every reason to watch the lower Po closely, for Ferrara formed Milan's most vital passage toward the Adriatic. If Ferrara were to fall under Venetian domination, or worse, into a papal-Riario order hostile to Sforza interests, that access would be constrained at best and effectively blocked at worst. Control over riverine movement therefore affected not only troops and territory but the provisioning of a populous inland state dependent on imported "lean" foods during fast seasons. The Este-Sforza connection thus joined dynastic strategy to material geography: a stronger Ferrara at Comacchio implied a weaker Venetian grip on Milan's access to the Adriatic as well as on the inland food and salt corridor.

Ercole's challenge appeared especially dangerous because it was backed by a real diplomatic horizon. Through Naples, Milan, Florence, and other regional ties, Ferrara could imagine resisting Venetian retaliation more credibly than before. That is why the reactivation of Comacchio must be understood at something closer to an industrial and geopolitical scale than a local fiscal dispute. If Ferrara could restore production in the delta and route that salt inland, it would not merely inconvenience Venice; it would begin to erode the very logic of the *ordo salis* by demonstrating that the inland market could be reached without Venetian mediation. And so the deepest irony of the conflict comes into view: salt, long associated with preservation, health, and even the maintenance of peace, became here the very substance over which peace was broken. In that sense, this was, quite literally, the spilling of salt.

The underlying pressure between Ferrara and Venice came from "illicit" salt production and contraband, but the formal *casus belli* that pushed Venice to mobilize troops emerged through the *visdomino* affair. Contemporary documentation makes clear that near the end of 1481 the Venetian official overreached in a dispute involving a Ferrarese priest and debt. The matter escalated into a conflict over ecclesiastical immunity; the vicar of the bishop of Ferrara sided against the Venetian official and excommunicated him, effectively driving him out of the city. That episode gave the war party in Venice a public outrage around which to rally opinion. Economic grievances could now be recast as an intolerable insult to Venetian

authority. The dispute over Comacchio's salt pans, the anger over contraband, and the humiliation of the *visdomino* fused into one explosive political moment. By late 1481 the groundwork for war had been laid.

Lorenzo de' Medici and the Milanese Alliance

It was precisely at this point, in late 1481, that Lorenzo de' Medici moved preemptively to secure Milan. He understood that Ludovico Sforza's cooperation could not be taken for granted, for he knew that Milan constituted the immediate military weight behind Ercole d'Este. If Ferrara was to resist Venetian aggression, it would do so not by isolation but through the strength of its alliances, above all through Naples far in the south and Milan at its backdoor. Lorenzo therefore went directly to Ludovico. Milan was formally ruled by the young Gian Galeazzo Sforza, while effective power rested in the hands of the ambitious and politically exposed Ludovico il Moro. That regime required legitimacy, allies, and practical military preparation. Lorenzo therefore resolved to send an official Florentine delegation to the Sforza court before the crisis ripened into full war. The aim was not merely ceremonial amity. It was to tighten the Florence-Milan-Ferrara axis, measure Ludovico's readiness, and ensure that Venice would face a coordinated, immediate opposition rather than a scattered peninsula.

The figure chosen to lead that mission was Bernardo Rucellai, Lorenzo's brother-in-law and one of the most intelligent and symbolically apt diplomats Lorenzo could have selected. Rucellai was not only a patrician humanist but also a wealthy member of Lorenzo's intimate familial and political circle through his marriage to Nannina de' Medici. He combined aristocratic standing, literary cultivation, and political trustworthiness. In the formal world of Renaissance diplomacy, this mattered greatly. An *oratore* was expected to do more than negotiate. He had to speak persuasively, observe discreetly, gather intelligence, and embody the refinement and seriousness of the state he represented. Rucellai could do all of this while also functioning as Lorenzo's reliable political extension within Milan.

The delegation that departed Florence in February 1482 therefore carried more than messages. It carried a strategy. Lorenzo did not send Rucellai alone. He surrounded the mission with cultural and technical talent calculated to appeal to Ludovico's ambitions and to bind Florence to Milan through prestige as well as policy. This is where the Salt War intersects with one of the decisive movements in Renaissance cultural history: the Florentine export of poets, musicians, engineers, and artists into Lombardy at the very moment that the Po basin was becoming a military theater.

Bernardo Bellincioni formed part of that broader mission and soon proved its political usefulness. He went to Milan as part of a deliberate Florentine embassy, his presence serving diplomatic and cultural

ends at once. Once established at the Sforza court, he became far more than an entertainer. He helped articulate Sforza magnificence in verse and pageantry, serving as a literary instrument of regime legitimation. His later sonnet on Leonardo's portrait of Cecilia Gallerani and his collaborations on court spectacle belong to a later phase, but their roots lie in this earlier moment, when Florence understood that poetry, performance, and cultural prestige could themselves operate as instruments of diplomacy.

Among the most consequential members of the Milanese retinue was Leonardo da Vinci. He has traditionally been thought to have gone to Milan chiefly as an artist and courtly virtuoso, traveling under Medicean auspices as a bearer of artistic prestige — famously associated with the splendid silver lyre fashioned in the form of a horse's head or skull, an object at once ingenious, strange, and courtly. Yet a more recent interpretation has brought another dimension of his presence into clearer view: Leonardo arrived not only as a musician and painter, but as a prospective military architect and sculptor whose value to Ludovico Sforza extended well beyond performance and ornament. Leonardo did not travel alone. He moved within a broader Florentine entourage that included figures such as the musician Atalante Migliorotti and the eccentric mechanic Tommaso Masini, called Zoroastro, all of whom accompanied or soon followed the mission. What mattered politically was that Lorenzo was not merely dispatching an ambassador. At the very moment that he sensed that conflict was brewing, he projected into Milan a temporary Florentine court.

The conflict soon erupted peninsula-wide only because Venetian interests converged with papal ambition. Pope Sixtus IV had already acquired a reputation for aggressive temporal politics. His support for Girolamo Riario's expansion, his involvement in the crisis over Imola and Forlì, and his complicity in the broader anti-Medicean world that produced the Pazzi conspiracy all marked him as a pontiff willing to subordinate peace to dynastic and territorial advantage. By helping place Riario in Imola and Forlì, Sixtus had effectively pushed papal-nepotic power up against the borders of Florentine territory while more directly interposing it along the lines connecting Florence to Ferrara and, beyond Ferrara, to the strategic seaport of Comacchio. Modern reference works and contemporary narratives alike connect Sixtus and Riario to the Pazzi affair and emphasize the pope's readiness to use interdict, war, and alliance-building for political ends. Ferrara now entered that same larger logic. Because it was formally a papal fief, however loosely controlled in practice, it could be represented as a territory open to papal intervention. Sixtus, eager for hereditary expansion and evidently unsatisfied with Imola and Forlì alone after his failed attempt to bring Florence under his influence, began to look toward absolute control of Ferrara as the next and greater prize.

Sixtus IV, Riario, and the Papal Ambitions in Ferrara

The attraction of Ferrara to Sixtus IV and Girolamo Riario becomes clearer when set beside their recent territorial ascent. With papal backing, Riario had already advanced through Imola and then, in 1480, through the strategic acquisition of Forlì. Ferrara now presented itself as the next and greater prize: a papal fief in formal theory, a dynastic opportunity in practice, and a crucial gateway to the lower Po and the Adriatic world beyond, including Comacchio. What Sixtus and Riario sought, therefore, was not merely influence but the consolidation of a durable hereditary bloc stretching through the Romagna toward the Ferrarese delta.

This ambition converged powerfully with Venetian interests, though the two allies sought different rewards. Venice aimed to destroy Comacchio's competitive salt capacity and tighten its hold over the Polesine and the routes of the delta; Sixtus aimed to displace Ercole d'Este and draw Ferrara into Riario's expanding sphere. In effect, the alliance rested on a partitionist logic: Venice would secure the economic and territorial advantages of the lower Po, while the papacy would convert Ferrara itself into a dynastic possession. The force of the alliance lay precisely in that convergence of unlike aims. Both parties believed they could profit from the same war, even if the design would ultimately fail.

The Outbreak of War and the Seizure of Comacchio

When war began in 1482, the military operations themselves confirmed how central the delta was. The attack on Ferrara, launched on 1 May 1482, was not simply a frontal assault on a neighboring duchy. Venice moved with the confidence of a power freshly released from the long Ottoman war after the peace of 1479, and could now direct major naval, financial, and mercenary resources toward the mainland. Venetian commanders exploited precisely those advantages in the estuarine environment where the republic was strongest, using shallow-draft armed river craft and amphibious coordination between fleet and land forces to strike rapidly across the Po system. The early capture of Adria and, crucially, Comacchio revealed strategic priority. Venice aimed first to extinguish the threat where it arose: in the lower delta, at the point where Ferrara's salt production and lagoon wealth intersected. Comacchio's occupation and the dismantling of its salt-producing capacity were therefore not incidental acts of war but among the republic's primary objectives. Venice did not wait for a final diplomatic settlement before acting against the salt pans; in the first weeks of the war it sought to eliminate the rival capacity physically.

Leonardo da Vinci and the Engineering of Defense

For Leonardo da Vinci, newly arrived in Milan under Medicean sponsorship, this was a moment of technical opportunity. In the famous draft letter later preserved in the *Codex Atlanticus*, Leonardo presented himself to Ludovico il Moro not primarily as a painter but as a military engineer: a designer of portable bridges, siege systems, bombardment techniques, mining operations, armored vehicles, hydraulic works, and fortifications adaptable to every terrain. The structure of the letter is revealing. Only at the end, after laying out nine categories of martial and mechanical expertise, does he mention sculpture, painting, and monumental art. The war footing of Milan explains the emphasis. Ludovico needed practical advantage against Venetian force, especially along the riverine frontier, and Leonardo understood, or was guided to understand, that military usefulness would secure him more firmly than courtly entertainment alone.

This reframing of Leonardo's role should not be detached from the Florentine mission itself. Rucellai's diplomatic purpose and Leonardo's self-presentation complemented one another. Florence was offering Milan not only political support but technical ingenuity. In the same movement by which Lorenzo sought to bind Ludovico to the anti-Sixtine and anti-Venetian axis, Leonardo sought to bind himself to Ludovico by promising a new science of war. The famous letter therefore belongs not merely to the biography of an artist but to the geopolitics of the Salt War.

To break Comacchio's saline was to do more than suppress one source of fiscal competition. It was to strike at the preservative base of the entire lagoon economy on the Adriatic. The eel harvest, the *acquadella* trade, the packing of fish for inland sale, the autumn-to-Lent conversion of abundance into durable commodity — all of this depended on salt. Destroying the pans thus attacked Ferrara's sovereignty at the precise point where ecology, food processing, and commerce met. Venice and the Pope were not only capturing territory; they were interrupting a food system.

The liturgical implications were real, even if not always explicitly stated in diplomatic rhetoric. A weakened Comacchio meant a weakened supply of preserved "lean" proteins to inland consumers. In practical terms, therefore, the war touched the provisioning chains by which households, monasteries, courts, and cities navigated the weekly and Lenten discipline of abstaining from meat. What Venice defended as monopoly, others experienced as access to lawful food in a penitential society.

The land campaign moved simultaneously through the Polesine, and after the sack of Comacchio the pattern of Venetian advance became even more alarming. Having struck first at the delta's productive

core, Venetian forces under Roberto Sanseverino then pushed westward up the Po, taking and pressuring territory along the river's north side and the surrounding zone — beginning with Adria, then moving through Polesella and Ficarolo, with Lendinara and Badia likewise drawn into the widening sphere of Venetian occupation and control. Pushing to the doorstep of Mantua, this was not merely local devastation. It was a progressive encroachment along the very corridor that linked Ferrara, the lower Po, and the inland states beyond. Such movement westward would necessarily have concerned Ludovico Sforza, for it suggested that Venice was no longer content simply to punish Ferrara or suppress Comacchio's salt capacity, but was extending its grasp along the riverine axis on which Milan's own strategic and commercial interests depended.

By late 1482 the Ferrara capital itself was under grave pressure. Siege, bombardment, hunger, and plague all intensified the crisis. The wider war likewise expanded: Alfonso of Calabria, in league with Ferrara, invaded papal territory from the south to relieve pressure on Ferrara; the battle of Campomorto, won by papal forces in August 1482, brought a papal tactical success under Roberto Malatesta, but his death soon after deprived Sixtus of his best commander. The war was now no longer a regional dispute. It had become a full Italian crisis.

The anti-Venetian coalition suffered other setbacks as well. Federico da Montefeltro, the most formidable captain available to the Florence-Milan axis, died in the late summer of 1482, weakening allied coherence at precisely the moment when Venetian pressure was at its peak. The result was not total collapse, but it helps explain why the league struggled to translate broad strategic convergence into rapid relief for Ferrara. The coalition understood the danger; it did not always possess the means to answer it efficiently in the field.

Inside Ferrara the pressure was catastrophic. Venetian artillery and blockade conditions produced acute scarcity, while plague ravaged both the city and the armies in the field. The wider civic effects were severe enough to disrupt the intellectual life of the duchy as well as its defenses. Yet Ferrara did not simply collapse under bombardment. Ercole's personal leadership mattered: he remained visibly engaged in the defense of the city and in operations on the river frontier, and Ferrarese resistance repeatedly frustrated the hope of a quick Venetian decision. The contrast is instructive. Venice could devastate the delta, dominate the waterways, and advance westward through the Polesine, but reducing Ferrara itself proved far more difficult than neutralizing Comacchio.

The formation of the anti-Venetian league makes sense only in this broader frame. Naples, Milan, Florence, Bologna, Mantua, and Ferrara all had reasons to resist the joint papal-Venetian design. Milan feared not only Venetian expansion toward its eastern allies in the abstract, but the concrete reality of a Venetian advance moving up the Po and toward the frontier strongholds that marked the outer edge of Sforza power. Florence, already embittered by Sixtus's earlier hostility and his support of anti-Medicean politics, opposed both papal aggrandizement and Venetian economic predominance. Naples was linked to Ferrara by marriage and opposed any papal restructuring of the mainland that would strengthen Rome or Venice. Thus the defense of Ferrara was also the defense of the balance of power created after Lodi. Comacchio's salt pans were one of the concrete economic cores within that larger struggle.

For Milan, moreover, the issue was not reducible to abstract balance-of-power theory. Venetian mastery of the delta threatened to tighten control over the very riverine networks through which Lombardy received a range of necessary goods, among them preserved fish suitable for days of abstinence. A republic that could dictate salt could also influence the cost and movement of the products that depended upon salt. In that sense Milan's resistance had a provisioning logic as well as a geopolitical one. The Comacchio-Po corridor touched both statecraft and subsistence, and Venice's steady encroachment westward after Comacchio made that danger unmistakably clear.

Casalmaggiore and the Riverine Strategy

That logistical reality helps explain the sudden strategic importance of places farther up the Po, especially Casalmaggiore. Situated on the river near Cremona, on the northern bank of the Po, Casalmaggiore was far more than a minor fortified town. It was a true river-key, controlling the movement of grain, salt, and military force between the Lombard plain and the Adriatic world beyond. In effect, it marked a frontier line: the easternmost reach of secure Milanese control, or, seen from the other side, the westernmost point toward which Venetian power could plausibly press. Its importance was therefore not accidental or newly invented in 1482. Throughout the fifteenth century it had stood as a contested pawn in the long tug-of-war between Milan and Venice for mastery of the Po corridor.

The century had begun with Casalmaggiore firmly in the hands of the Visconti of Milan. But as Venice expanded its *Stato da Terra*, the town became an exposed and coveted objective. In 1427 the Venetian commander Carmagnola seized it, opening a long cycle of contest and recovery that revealed its true significance. For Venice, Casalmaggiore functioned as a bridgehead toward the interior of Lombardy; for Milan, its loss meant the severing of a vital artery on the river. During the rise of Francesco Sforza, the

struggle for such river strongholds became integral to the larger fight for Milanese security, and Casalmaggiore was recovered around 1448. After the Peace of Lodi in 1454, it entered a more stable phase, serving for decades as Milan's southeastern sentinel, a fortified watchpoint facing the Venetian threat along the Po and the waters beyond the Oglio. The later loss of the town in 1499 would only confirm how enduringly exposed and strategic it had always been.

Seen in that light, Ludovico's concern in the early 1480s becomes entirely intelligible. If Venice could push so powerfully and rapidly upstream after striking Comacchio, Casalmaggiore would become a hinge of Milanese security. The problem was that its existing walls belonged to an older military world. High, relatively thin masonry designed against ladders and arrows performed badly against modern artillery. Cannon fire did not merely chip such walls; it shattered them, producing deadly fragments and rapidly opening practicable breaches. In a conflict increasingly shaped by bombardment, river mobility, and territorial encirclement, the weakness of Casalmaggiore's defenses exposed a key vulnerability of the Milanese eastern flank.

Within that context, the Florentine mission to Milan acquired a directly military dimension. Correspondence associated with Bernardo Rucellai's presence at court reveals concern with fortification and readiness, not merely with rhetoric and alliance. The matter became especially concrete in 1483, when Ludovico il Moro and Federico Gonzaga were at Casalmaggiore in mid-February in advance of allied consultations at Cremona. The speed with which discussion followed suggests that the fortress's deficiencies were immediately recognized and that its defenses were judged in need of improvement.

We have documentary confirmation soon afterward. In a letter of 6 March 1483, Bernardo Rucellai wrote to Lorenzo de' Medici that he had spoken with Ludovico about the "plan for Casale Maore," and that Ludovico replied that, since the plan for the fortress still pleased Lorenzo and had his approval, it pleased him all the more. The exchange is highly revealing. It shows that a design for the fortress was already under discussion at the highest level, that Lorenzo's judgment carried weight in Milan, and that Rucellai was functioning not only as a political ambassador but also as an intermediary in a matter of urgent military architecture.

Here Leonardo's newly advertised competence as engineer became concrete. His role in Milan has often been framed principally in artistic terms, yet the military setting of 1482–1483 brings another dimension into view. In the famous draft letter preserved in the *Codex Atlanticus*, Leonardo offered Ludovico not simply painting or courtly ornament, but military inventions: portable bridges, siege devices,

bombardment systems, methods for draining moats, secret passages beneath fortifications and rivers, covered wagons armed with artillery, and other engines of war. Only after enumerating these martial and mechanical capacities did he turn to sculpture and painting. In that setting, his drawings in Paris Manuscript B, connected with the redesign of Casalmaggiore's fortress, show a mind grappling with the new artillery of war (Figure 2). Pietro C. Marani has plausibly identified folio 18 verso of Manuscript B as a likely study for the intervention at Casalmaggiore, or at least as a drawing closely bound to that project.

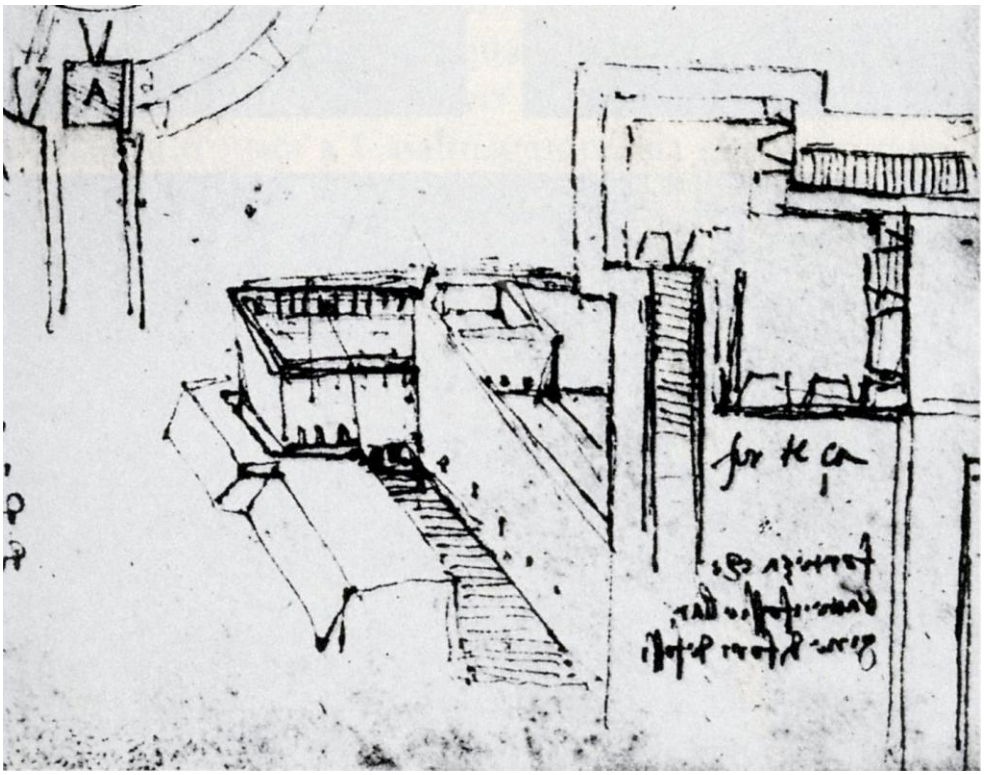


Figure 2

Whether or not every element of the scheme can be tied to a single moment of execution, the strategic logic is unmistakable. The Salt War forced Milan and its allies to confront the inadequacy of medieval fortification, and Leonardo entered Sforza service just as that realization became urgent. In that sense, the Casalmaggiore episode does more than illuminate a single unrealized project. It strongly suggests that Leonardo was already at Ludovico's disposal in a way that exceeded the ordinary presence of an artist at court. If Lorenzo had indeed sent him to Milan alongside Rucellai as part of the broader Florentine mission against Pope Sixtus' ambition, then Leonardo begins to appear less as an independent émigré and more as a kind of Medicean offering to Ludovico — a prestige asset, but also a technical resource, intended to be employed where Milan's needs were greatest. Casalmaggiore would fit that logic perfectly.

Yet the importance of Casalmaggiore lies partly in the fate of the project itself. Leonardo's designs appear to have received serious consideration, but the full reconstruction was not carried out. The reasons were brutally practical: war consumed money, labor, and time faster than even an ambitious prince could command them. A state struggling to fund mercenaries, artillery, transport, and emergency operations could not easily divert the massive resources required for a thorough infrastructural overhaul. This tension between conceptual brilliance and operational constraint is deeply characteristic of Renaissance warfare. Still, even unrealized plans mattered. For Leonardo, the Casalmaggiore problem validated his standing as more than a court curiosity. For Milan, it marked the entry of mathematical military engineering into the daily logic of state defense.

Papal Reversal and the Treaty of Bagnolo

By the end of 1482, however, Sixtus IV realized that Venice had no intention of fighting merely to prepare Ferrara for Riario. A victorious Venice would keep what it took. The pope who had backed war for dynastic expansion now faced the prospect of a far more dangerous outcome: a vastly enlarged Venetian power dominating the Po Delta and threatening papal interests in the Romagna. Diplomatic pressure from Milan and Florence reinforced this fear. Sixtus therefore reversed course, made peace with Naples in December 1482, and by 1483 had turned openly against Venice. He demanded that Venice cease hostilities; when the republic refused, he placed it under interdict and excommunicated its leadership. The irony is striking. The pope who had helped engineer the war against Ferrara ended by condemning his own former ally because that ally had become too successful.

This reversal did not arise from moral scruple. It arose from geopolitical alarm. Sixtus had supported war because he imagined Ferrara as a prize to be redistributed; he recoiled when it became clear that Venice intended not controlled redistribution but durable aggrandizement. Florence and Milan had every incentive to intensify that fear in papal calculations. Both courts understood that a Venice left in command of the delta, the Polesine, and the terms of inland provisioning would emerge from the war as something much closer to a hegemon than the post-Lodi system could tolerate.

Even so, Venice endured. The same salt regime whose protection had helped produce the war also furnished the republic with extraordinary resilience. Its financial depth, commercial structure, and territorial gains allowed it to continue fighting despite isolation. By 1484 the conflict had become a grinding war of attrition. No side could secure everything it wanted. Venice could hold major gains but not wholly digest Ferrara; the league could resist but not decisively expel Venice from all it had seized.

The Treaty of Bagnolo on 7 August 1484 ended the struggle. Ferrara survived, but at a price: Venice retained the Polesine of Rovigo, extending its mainland reach to its greatest extent. Just as importantly for the issue at hand, Ferrara's ability to exploit Comacchio's saltworks was curtailed, and Venetian monopoly interests emerged vindicated. Riario, meanwhile, received nothing like the grand territorial reward once envisioned. He was left empty-handed.

In geopolitical terms Bagnolo marked the high-water mark of Venetian mainland expansion. The annexation of the Polesine pushed Venetian power to its broadest terrestrial extent, while the settlement also codified what the war had really been about from the beginning: the neutralization of Ferrara as a salt rival. Comacchio's productive threat was not merely suppressed by force in the field; it was restrained in the diplomatic order that followed the war. The Treaty of Bagnolo thus stands not only as a territorial settlement but as the juridical vindication of monopoly.

The Failure of Papal Designs and the Irony of Peace

The aftermath underscored the failure of Sixtus's design. Contemporary and later accounts alike report his fury at learning of the peace, above all because it had been concluded without securing Ferrara for Riario and without punishing Venice in proportion to its defiance. He died only days later, on 12 August 1484. The story is almost too neat in its historical irony: a pope who had repeatedly preferred war as an instrument of terrestrial and familial expansion was confronted at the end by a peace that left his nephew without Ferrara and his enemies materially stronger. The hope that Riario would dominate Ferrara—and through Ferrara gain indirect mastery over Comacchio and the lower delta—had come to nothing.

The public perception of his reign in Rome was distilled by the chronicler Stefano Infessura into six scathing satirical epitaphs that circulated upon his death:

1. **The Greedy Rome:** "A gluttonous pimp, a pathic, a prostitute, a betrayer, an adulterer—if he comes to Rome, he will instantly be a Croesus."
2. **The Ruin of God:** "A distinguished sodomite, a furious robber, an adulterer; the destruction of the City and the ruin of God."
3. **Surpassing Nero:** "Rejoice, ancient Nero, Sixtus surpasses you in crime; here every wickedness and vice are enclosed together."
4. **The Irony of Peace:** "Sixtus, you lie here at last, a despiser of faith and of justice; as you were an enemy of peace, by peace—having been extinguished—you die."

5. **The Litany of Crimes:** "Debaucheries, famine, slaughters, usuries, thefts, pillages, and whatever kind of wickedness—with you as leader, Rome endured."
6. **The Sacrifice:** "Say: Rejoice, the victim of the new Sixtus is sacrificed; Open up: for the gate of heaven was closed."

Conclusion: How Salt Spilled the Peace of Italy

Seen whole, the Salt War was far more than a border conflict. It fused Venetian monopoly, Ferrarese sovereignty, papal-nepotic ambition, and the wider struggle for the balance of Italy into a single crisis. Venice fought to preserve the salt regime that financed its commercial empire; Ferrara fought to defend the eel-and-salt economy centered on Comacchio; Sixtus IV sought to reorder the map in favor of Girolamo Riario; and the league formed because Ferrara's destruction threatened the equilibrium of the peninsula. Comacchio was the catalyst that set these forces ablaze. Its eel depended on preservation, its preservation depended on salt, and its abundant salt-pans made it a direct challenge to Venetian control of inland trade. To move against Ferrara was therefore, in no small measure, to move for Comacchio. Thus a war fought over salt ended by overturning the very thing salt was meant to preserve: not only food and wealth, but peace itself.

Resources

Infessura, Stefano. *Diario della città di Roma di Stefano Infessura scribasenato*. Edited by Oreste Tommasini, nuova ed., Forzani e c. Tipografi del Senato, 1890.

Bergier, Jean-François. *Una storia del sale*. Venice: Marsilio, 1984.

Gelichi, Sauro. "The Mediterranean Emporium of Comacchio and Early Medieval European Trade (7th-10th century AD)." *Vegetation History and Archaeobotany*, vol. 18, no. 5, 2009, pp. 389–402.

Albala, Ken. *Eating Right in the Renaissance*. Berkeley: University of California Press, 2002.

Simonetta, Marcello, editor. *La congiura della verità*. Naples: La scuola di Pitagora, 2012.

Poliziano, Angelo. *Coniurationis commentarium / Commentario della congiura dei Pazzi*. Edited by Leandro Perini. Florence: Firenze University Press, 2012.

Versiero, Marco. “Leonardo’s Town Planning Studies: the Encounter of Nature, Economy and Politics.” *Leonardo da Vinci—Nature and Architecture*, edited by Constance Moffatt and Sara Taglialagamba, Brill, 2019, pp. 345–354.

Machiavelli, Niccolò. *Istorie fiorentine*. (Primary Source).

Hocquet, Jean-Claude. *Le saline dei veneziani e la crisi del tramonto del Medioevo*. Rome: Jouvence, 2003.

Luzzatto, Gino. *Il mercato del sale nella Repubblica veneta*. (As cited in context of Venetian business history).

Wickham, Chris. *Framing the Early Middle Ages: Europe and the Mediterranean, 400–800*. Oxford: Oxford University Press, 2005.

McCormick, Michael. "Where do trading towns come from?" In *Post-Roman Towns, Trade and Settlement in Europe and Byzantium (400–800)*. Edited by Joachim Henning. Berlin: De Gruyter, 2007, pp. 47–68.

Acton, Harold. *The Pazzi Conspiracy: The Plot Against the Medici*. London: Thames & Hudson, 1979.

Natali, Federico. "La 'guerra del sale' tra Venezia e Ferrara (1482–1484) e la presa di Gallipoli dai Veneziani nel maggio 1484." *Quaderni dell’Archivio Storico di Gallipoli*, 2019.

Bicheno, Hugh. *Vendetta: High Art and Low Cunning at the Birth of the Renaissance*. London: Phoenix, 2007.

Capponi, Niccolò. *Al traditor s'uccida: la congiura de' Pazzi, un dramma italiano*. Milan: Il Saggiatore, 2014.

Hibbert, Christopher. *The Rise and Fall of the House of Medici*. London: Penguin, 1974.

Daniels, Tobias. *La congiura dei Pazzi: I documenti del conflitto fra Lorenzo de' Medici e Sisto IV. Le bolle di scomunica, la "Florentina Synodus" e la "Dissentio"*. Florence: Edifir, 2013.

Osmond, Patricia J. "Catiline in Fiesole and Florence: The After-Life of a Roman Conspirator." *International Journal of the Classical Tradition*, vol. 7, no. 1, 2000, pp. 3–38.

Bordin, Mariangela. *Venezia e il Polesine di Rovigo (1482–1484)*. (Academic Monograph/Thesis).

Eiche, Sabine. "Cardinals and the War of Ferrara (1482–84)." *Royal Studies Journal*, vol. 4, no. 2, 2017, pp. 64–87.

Mallett, Michael. *Mercenaries and their Masters: Warfare in Renaissance Italy*. London: Bodley Head, 1974.

Prisciani, Pellegrino. *Historiae Ferrarienses / Historiae Ferrariae*. (Primary Source Manuscript).

Tuohy, Thomas. *Herculean Ferrara: Ercole d'Este, 1471–1505, and the Invention of a Ducal Capital*. Cambridge: Cambridge University Press, 1996.

Heydenreich, Ludwig H., Bern Dibner, and Ladislao Reti. *Leonardo the Inventor*. New York: McGraw-Hill, 1980.

Marani, Pietro C. "Leonardo da Vinci architetto per la Rocca di Casalmaggiore." In *Il principe architetto: atti del Convegno internazionale*. Edited by Arturo Calzona et al. Mantua: Leo S. Olschki, 2002, pp. 99–123.

Vasari, Giorgio. *Lives of the Most Eminent Painters, Sculptors, and Architects*. (Biographical Source).

Zöllner, Frank, and Sara Taglialagamba. "Leonardo da Vinci." *Oxford Bibliographies in Art History*, 2014.

Cortonesi, Alfio. "Fra autoconsumo e mercato: l'alimentazione rurale e urbana nel basso Medioevo." In *Storia dell'alimentazione*. Edited by Jean-Louis Flandrin and Massimo Montanari. Rome-Bari: Laterza, 1997, pp. 325–335.

Montanari, Massimo. *Medieval Tastes: Food, Cooking, and the Table*. Translated by Beth Archer Brombert. New York: Columbia University Press, 2015.

Grieco, Allen J. *Classes sociales, nourriture et imaginaire alimentaire en Italie (XIVe–XVe siècles)*. PhD Thesis, EHESS Paris, 1987.

Laurioux, Bruno. "I libri di cucina italiani alla fine del Medioevo: un nuovo bilancio." *Archivio Storico Italiano*, vol. 154, 1996, pp. 33–58.

Rebora, Giovanni. *La cucina medievale italiana tra Oriente ed Occidente*. Genoa: Sagep, 1996.

Ribani, Filippo. "L'impronta contadina sull'alta cucina del basso Medioevo italiano." *Storicamente*, vol. 15, 2019, pp. 1–23.

Pederzoli, Aurora, et al. "Luxury food and ornamental plants at the 15th century AD Renaissance court of the Este family (Ferrara, Northern Italy)." *Vegetation History and Archaeobotany*, vol. 18, no. 5, 2009, pp. 389–402.