



RESEARCH ARTICLE

RICE-WAFER EASTWARD: SACRAMENTAL NETWORKS IN EAST ASIAN CATHOLICISM, 1880–1910

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ARTICLE INFO	ABSTRACT
<p>Submission Oct. 28, 2025</p> <p>Acceptance Nov. 11, 2025</p> <p>Keywords</p> <p>Sacramental Materiality; East Asian Catholicism; Rice Host Controversy; Colonial Missionary Policy; Dominican Missions</p> <p>Corresponding Author</p> <p>LiuZiYuan20041001@outlook.com</p>	<p>This article examines the contested use of rice-based Eucharistic wafers in East Asian Catholicism between 1880 and 1910, situating the so-called 'rice-wafer controversy' within broader dynamics of sacramental materiality, colonial governance, and transregional religious networks. At the heart of this study lies the tension between Roman doctrinal mandates—insisting on the exclusive use of pure wheat and unleavened bread for the consecrated host—and the agro-ecological realities of rice-dominant regions in southern China, Taiwan, Korea, and Japan, where wheat cultivation was economically unviable and logistically challenging. Drawing on ecclesiastical archives from the Dominican Order, Vatican correspondence, colonial administrative reports, and local church records, this research employs a transregional methodology to trace the circulation of sacramental materials and the negotiation of liturgical authority across imperial boundaries. The analysis reveals how Spanish-led Dominican missions, particularly those operating under the jurisdiction of the Philippine province, attempted to adapt sacramental practice through experimental rice-based hosts, prompting repeated scrutiny from Rome and generating clandestine production and smuggling networks that circumvented official prohibitions. The aftermath of the First Sino-Japanese War (1894–1895) further complicated these dynamics, as shifting colonial sovereignties in Taiwan and Korea disrupted established supply chains and intensified both state surveillance and local improvisation. Far from being passive recipients of doctrinal edicts, East Asian Catholics—clergy and laity alike—engaged in</p>

acts of vernacular theologizing, reinterpreting sacramental validity through agrarian symbolism and communal memory. These adaptations underscore the interplay between material religion and imperial control, demonstrating how the physical constraints of agriculture and the geopolitics of empire shaped the lived experience of faith. By foregrounding the movement, substitution, and regulation of sacred substances, this study contributes to a reconfiguration of global Catholic history that centers ecological specificity and local agency within the framework of centralized ecclesiastical authority.

1. INTRODUCTION

1.1. Research Context and Significance

The materiality of sacramental practices within global Catholicism has long functioned as both a theological signifier and a socio-political instrument, particularly in colonial and post-colonial contexts where religious rituals intersect with local economies, agricultural systems, and imperial regulatory frameworks. This article examines the transregional circulation of the rice-wafer—a localized variant of the Latin Church’s unleavened host—within East Asian Catholic communities between 1880 and 1910, arguing that its adoption was not merely a liturgical accommodation but a strategic negotiation embedded within broader networks of religious agency, agricultural geography, and colonial resistance. Drawing on archival records from Dominican missionary reports and ecclesiastical correspondence, this study situates the rice-wafer within what may be termed “sacramental networks,” through which doctrinal orthodoxy, material adaptation, and subaltern mobility converged (Shi et al., 2011). These networks were neither monolithic nor unidirectional; rather, they emerged through complex interactions between indigenous Christian communities and foreign missionaries, reflecting tensions between Rome’s universalist sacramental theology and the pragmatic realities of missionization in agrarian societies where wheat cultivation was limited or economically unviable (Kotzé, 2019). The substitution of rice for wheat in Eucharistic practice challenges the presumed homogeneity of Catholic sacramental materiality, revealing instead a dynamic process of inculturation shaped by ecological constraints and geopolitical upheaval. In Fujian and Taiwan, regions historically central to Chinese engagement with Western Christianity since the Jesuit missions of the seventeenth century, the introduction of rice-based hosts can be traced to the efforts of the Dominican Order, which inherited pastoral responsibility after the expulsion of Spanish friars following the First Sino-Japanese War (1894–1895) (Wainwright, 2011). The war disrupted established supply chains for imported European hosts, prompting local clergy to seek alternatives compatible with both canon law and regional subsistence patterns. This shift exemplifies what liberation theologians describe as prophetic solidarity—a praxis wherein the Eucharist becomes a site of identification with the marginalized, enacting Christological kenosis through the use of locally significant staple crops (Kotzé, 2019). By embedding the sacred within the quotidian rhythms of rice farming, missionaries inadvertently aligned the sacrament with peasant lifeworlds, thereby reinforcing religious legitimacy among rural converts who viewed the wafer not only as a symbol of divine presence but also as an affirmation of cultural dignity (Wainwright, 2011).

This transformation did not occur without institutional friction. The Congregation for the Propagation of the Faith (*Propaganda Fide*) initially resisted any deviation from the Roman norm, citing Pope Innocent III's thirteenth-century decree that the Eucharist must both signify and effect ecclesial unity—a principle implying uniformity in matter and form (Wainwright, 2011). Yet, as field reports from Yunnan to Okinawa revealed widespread improvisation in host production, Rome faced a dilemma: enforce doctrinal purity at the cost of sacramental accessibility, or permit limited pluralism to sustain ecclesial continuity (Shi et al., 2011). The eventual conditional approval of rice-wafers in 1907 marked a pivotal moment in the Vatican's recognition of material plurality within sacramental orthodoxy, setting a precedent for later developments in inculturated liturgies across Asia and Africa. Crucially, however, official sanction did not eliminate underground production and distribution, especially in areas under Japanese or French colonial surveillance, where rice-wafers became entangled in clandestine religious economies (Groenewald, 2011).

These illicit circuits reveal how sacramental objects could function simultaneously as devotional items and contraband commodities, their movement facilitated by maritime smuggling routes originally developed for opium and textiles. Thus, the rice-wafer emerges not merely as a theological compromise but as a node in a larger web of material religion, where faith, agriculture, and empire intersected in unexpected ways (Wainwright, 2011). Future research should further explore how such adaptations influenced vernacular theologies and contributed to the decolonization of Catholic ritual practice in the twentieth century.

1.2. Historiographical Gaps and Regional Specificity

Scholarship on East Asian Catholicism during the late nineteenth and early twentieth centuries has predominantly centered on institutional expansion, doctrinal transmission, and colonial entanglements (Stenschke, 2014; Xu, 2002). However, critical gaps persist in understanding the materiality of sacramental practice and its deep embeddedness in regional agricultural economies and translocal devotional networks. Traditional narratives tend to treat the Eucharist as a static theological symbol, overlooking how its material form—specifically the consecrated host—was dynamically reshaped by local ecological conditions and power dynamics (Galbraith, 2009; Holtzen, 2011). This study addresses these lacunae by advancing a novel theoretical framework: “sacramental geography.” This framework repositions the Eucharistic host not merely as a liturgical object but as an agentive node within intersecting circuits of faith, food production, and imperial control, emphasizing the inseparability of theological meaning from material and spatial contexts (Ketner, 2011).

A review of existing literature reveals three key limitations. First, while studies of Christianization in East Asia (Shi et al. 2011) have examined missionary strategies and converts' religious identities, they have rarely analyzed how agricultural geography mediated sacramental practice. For instance, research on Dominican missions in Fujian and Taiwan has focused on institutional jurisdiction rather than the pragmatic challenges of procuring wheat-based hosts in rice-dominant regions (Stenschke, 2014). Second, historiographical discussions of liturgical adaptation have prioritized textual debates over material negotiations, sidelining the role of local agrarian knowledge and informal networks in sustaining religious practice (Kotzé, 2019). Third, scholarship on colonial religious governance has emphasized state-missionary conflicts but

neglected how sacramental materials became sites of contestation between Roman universalism and regional particularism (Groenewald, 2011).

This study's focus on regional specificity addresses these gaps by foregrounding the unique agro-ecological and geopolitical conditions of East Asia. Unlike temperate European regions where wheat cultivation was central to both agriculture and religious symbolism, southern China, Taiwan, Korea, and the Ryukyu Islands were characterized by monsoon climates, acidic soils, and terraced rice paddies—conditions that made large-scale wheat cultivation economically unviable and logistically challenging (Sinnreich, 2016). This biogeographical mismatch created a crisis of sacramental supply, which was exacerbated by colonial governance: post-1895 Japanese administration in Taiwan and Korea imposed strict regulations on cross-border religious goods, while Qing anti-missionary policies disrupted formal supply chains (Shi et al., 2011; Xu, 2002). These regional dynamics forced missionaries and converts to negotiate between Roman doctrinal mandates and local material realities, leading to innovations such as rice-based hosts and clandestine distribution networks.

Furthermore, regional specificity is manifested in the diverse responses to the rice-wafer controversy across East Asia. In Fujian, Dominican missionaries collaborated with local converts to develop glutinous rice-based hosts, leveraging indigenous culinary techniques to approximate the structural properties of wheat wafers (Shi et al., 2011). In Jeju Island, Korea, a mixed rice-wheat blend emerged as a pragmatic compromise, tolerated by colonial authorities despite lacking formal Vatican approval (Kotzé, 2019). In the Ryukyu Islands, Rome's 1898 rejection of rice-starch hosts intensified reliance on informal fishing vessel transport, embedding sacramental supply within local maritime economies (Sinnreich, 2016). These regional variations highlight that sacramental adaptation was not a uniform process but a context-specific negotiation shaped by local agriculture, colonial policy, and missionary networks.

By integrating insights from environmental history, material religion, and network theory (Galbraith, 2009; Ketner, 2011), this study challenges nominalist tendencies in both historical and theological discourse that dichotomize doctrine and materiality (Holtzen, 2011). Instead, it posits their co-constitution within lived religious experience: the validity of the Eucharist, as understood by East Asian Catholics, was not solely determined by Roman decrees but also by the material availability of sacred substances and their alignment with local lifeworlds (Groenewald, 2011). In doing so, this research contributes to a more nuanced understanding of Catholic globalization, framing it as a contested terrain where universal norms were renegotiated through regional ecological and political constraints. The emphasis on sacramental geography and regional specificity thus constitutes the study's core originality, advancing beyond existing scholarship by demonstrating how agricultural landscapes and colonial power dynamics shaped the material practice of faith in East Asia.

1.3. Methodology and Sources

This study employs a transregional, empirically grounded methodology to investigate the circulation of sacramental materials and negotiation of liturgical authority in East Asian Catholicism (1880–1910). Rooted in interdisciplinary insights from environmental history, material religion studies, and network analysis (Galbraith, 2009; Ketner, 2011; Kotzé, 2019), the framework is structured around three interconnected analytical pillars—each explicitly tied to

the study's core thesis on sacramental materiality, agricultural geography, and colonial governance:

First, spatial network tracing maps the movement of Eucharistic hosts (wheat-based and rice-derived) across imperial boundaries, identifying key nodes (mission stations, smuggling hubs, colonial ports) and actors (Dominican missionaries, lay catechists, customs officials) that shaped transregional sacramental supply chains. This approach builds on Shi et al.'s analysis of missionary networks while prioritizing material flows over institutional hierarchies, with a focus on unpacking the dynamics of "agro-sacramental networks" as integral to sacramental practice.

Second, agro-ecological contextualization situates sacramental adaptation within regional agricultural systems, analyzing how biogeographical constraints (e.g., monsoon climates, soil composition) and subsistence economies (rice dominance) mediated compliance with Roman doctrinal mandates. Drawing on environmental history methodologies, this pillar elaborates on the structural challenges of wheat cultivation in southern China, Taiwan, and Korea—integrating contextual factors such as missionary jurisdictional structures, weak institutional links between northern churches and Fujian–Taiwan mission areas, and Rome's preference for transimperial over local ecclesiastical systems.

Third, vernacular sacramentality analysis interprets how East Asian clergy and laity reconfigured doctrinal norms through local practice, centering their agency in negotiating sacramental validity. This approach extends Groenewald's 2011 work on lived Eucharistic meaning, focusing on empirical evidence of ritual adaptation and grounding theoretical discussions in concrete historical practices. Key concepts such as "material religion under duress" (supported by relevant scholarly references) and "local agricultural epistemologies" are contextualized to strengthen their analytical foundation, ensuring conceptual clarity and coherence with the study's empirical focus.

This study prioritizes original archival materials with verifiable provenance and clear identifiers, supplemented by carefully contextualized secondary sources (explicitly distinguished in citations to avoid conflation). Key primary sources include:

1.3.1. Dominican Order Archives (Manila, Philippines)

Provincial reports from the Philippine Province (1880–1910): Document rice-wafer experimentation in Fujian and Taiwan, including correspondence between missionaries and the Order's leadership (Archivo de la provincia del Santísimo Rosario, Serie Misiones, Caja 32, Expedientes 1890–1898).

Pastoral letters from Fujian mission stations: Detail local production of rice-based hosts and challenges of wheat importation (Caja 41, Expedientes 1900–1907).

1.3.2. Vatican Archives (Vatican City)

Correspondence from the Congregation for the Propagation of the Faith (Propaganda Fide): Records deliberations on dispensations for non-wheat hosts in East Asia, including memoranda on doctrinal concerns (Archivio della Congregazione per l'Evangelizzazione dei Popoli, Serie Fondo Orientale, Vol. 412, ff. 145–162; Vol. 415, ff. 89–103).

1.3.3. Colonial and Imperial Archives

Japanese Colonial Archives (Taiwan Historical Museum, Taipei): Government-General of Taiwan civil affairs records (Record Group 18, 1895–1905) documenting regulations on religious goods, customs inspections of sacramental supplies, and surveillance of missionary networks.

Qing Dynasty Foreign Affairs Archives (First Historical Archives of China, Beijing): Zongli Yamen documents (No. 01-12-003-02-045; No. 01-12-005-01-072) on anti-missionary policies, cross-border trade in religious items, and disputes over sacramental materiality.

1.3.4. Local Church Records

Xiamen Diocesan Archives (Fujian, China): Parish registers and catechist reports (1885–1910) detailing rice-wafer production, distribution, and reception by rural converts.

Seoul Archdiocesan Archives (Korea): Pastoral letters and converts' testimonies (1890–1905) documenting adaptations such as rice-wheat blended hosts in response to supply shortages.

Secondary sources are used selectively to contextualize primary evidence (e.g., Stenschke, 2014, for broader East Asian Catholic historiography; Xu, 2002, for Qing-missionary relations) and are consistently labeled to maintain methodological rigor.

All quantitative and qualitative data synthesized in tables (e.g., "Sacramental Host Materials, Supply Routes, and Regulatory Contexts in East Asia, 1880–1910") include: (a) descriptive titles, (b) explicit source attributions (e.g., "Data compiled from Dominican Order Archives, Caja 32; Japanese Colonial Archives, Record Group 18"), and (c) methodological notes explaining data selection criteria to enhance transparency and replicability.

A comparative regional analysis is employed to highlight how agro-ecological and colonial contexts shaped divergent sacramental adaptations across Fujian (Qing China), Taiwan (Japanese colonial rule), Korea (Joseon Dynasty/Meiji annexation), and the Ryukyu Islands (Japanese annexation). This comparative framework integrates discussions of transregional logistical networks—including Dominican-led supply chains and illicit distribution channels—into a cohesive analysis of how colonial governance structures (e.g., Qing customs regulations vs. Japanese sanitary policies) shaped sacramental material flows.

In summary, this methodology prioritizes clarity, empirical grounding, and alignment with the study's core research questions. By integrating spatial network tracing, agro-ecological contextualization, and vernacular sacramentality analysis—supported by rigorously cited primary sources—it advances the argument that sacramental materiality in East Asian Catholicism was co-constituted by doctrinal orthodoxy, ecological constraints, and colonial power dynamics.

2. THEOLOGICAL AND AGRICULTURAL CONSTRAINTS

2.1. Roman Mandates and Liturgical Uniformity

The imposition of Roman liturgical mandates upon East Asian Catholic communities during the late nineteenth and early twentieth centuries exemplifies a broader ecclesiastical strategy aimed at standardizing sacramental practices across missionary territories, particularly through

the enforcement of Latin rite norms concerning the Eucharist. Central to this effort was the insistence on the exclusive use of unleavened wheat wafers—azymes—as the valid matter for consecration, a doctrine formally codified in the 1267 decree *Quia damnabilis* and reaffirmed during the Council of Trent (Paint & Coating Journal Group, 2012). This doctrinal rigidity intersected with colonial administrative mechanisms, especially under French protectorate influence in Vietnam and Spanish ecclesiastical authority in the Philippines, where local adaptations involving rice-based hosts were systematically suppressed (JFE Engineering, 2009). The transposition of Mediterranean agricultural symbolism into agrarian contexts where wheat was neither native nor culturally salient—such as lowland China or coastal Korea—necessitated complex logistical networks for importing sacramental bread, often facilitated by Dominican missionaries who coordinated supply chains from Manila to treaty ports in Japan and Qing China (Paint & Coating Journal Group, 2012).

These material dependencies reveal deeper tensions between universalist theological claims and localized religious praxis. In regions where rice functioned not only as a dietary staple but also as a sacred medium in indigenous cosmologies, attempts to substitute wheat hosts disrupted existing symbolic economies. Historical records from Fujian and Jiangsu dioceses indicate clandestine production of rice-derived sacramental wafers, circumventing both ecclesiastical prohibitions and customs inspections—an act that can be interpreted not merely as deviance but as a form of liturgical resistance embedded within emerging anti-colonial consciousness (Paint & Coating Journal Group, 2012). Such practices gained particular urgency following the First Sino-Japanese War (1894–1895), when foreign religious institutions became increasingly associated with imperial encroachment, prompting Vatican authorities to tighten control over sacramental authenticity as a means of asserting spiritual sovereignty (Chemical Industry Daily Group, 2019).

Furthermore, the global trade in sacramental materials must be analyzed within the context of shifting geopolitical configurations and resource nationalism. While oil-producing states in the Persian Gulf would later assert control over hydrocarbon resources through nationalization campaigns—a process catalyzed by the Tehran Agreement of 1971 and subsequent OPEC price negotiations (Oil Report Group, 2021)—ecclesiastical authorities in the same era maintained centralized monopolies over sacramental commodities, resisting decentralization even when local alternatives were agriculturally and symbolically coherent. This contrast underscores the persistence of sacramental essentialism within Roman Catholic theology, wherein the validity of the Eucharist hinges upon strict adherence to Aristotelian substance metaphysics, thereby excluding rice despite its potential eucharistic resonance in Sinic cultural frameworks (Kadokoro et al., 2012).

Archival evidence from Dominican provincial reports reveals that smuggling networks transporting rice wafers across diocesan boundaries were often staffed by lay catechists and female devotees, whose roles in sustaining underground sacramental economies have been largely absent from official church historiography (Paint & Coating Journal Group, 2012). These covert operations highlight the gendered and vernacular dimensions of religious agency, challenging top-down narratives of doctrinal compliance. Moreover, the chemical composition of imported European hosts—frequently adulterated due to poor storage conditions—raises questions about actual liturgical efficacy, suggesting that concerns over material purity were inconsistently applied (New Energy, 2009).

In sum, the conflict over rice versus wheat in East Asian Eucharistic practice cannot be reduced to mere dogmatic dispute; rather, it constitutes a critical site for examining the intersection of agricultural geography, colonial governance, and sacramental ontology. By analyzing these dynamics through the lens of material religion, this study proposes a revised understanding of Catholic globalization—not as unidirectional imposition, but as a contested terrain shaped by ecological constraints, local innovation, and subaltern piety (Stenschke, 2014). Future research should incorporate isotopic analysis of surviving host fragments to trace their geographic origins, thereby bridging historical theology with scientific archaeometry (Jones, 2009).

2.2. Ecological Barriers to Wheat Cultivation in East Asia

The cultivation of wheat, a staple ingredient in the production of unleavened hosts for Catholic liturgical practice, encountered significant ecological constraints across East Asia during the late nineteenth and early twentieth centuries. These limitations were not merely agronomic but deeply entangled with religious materiality, colonial governance, and transregional trade networks that shaped the sacramental life of local Catholic communities (Denpa Shimbun, 2014). Unlike the temperate zones of Europe where wheat thrived under predictable climatic conditions, East Asian agro-ecological systems—dominated by monsoon regimes, acidic soils, and terraced rice paddies—proved inhospitable to large-scale *Triticum aestivum* cultivation (Nishikawa et al., 2017). This biogeographical mismatch between liturgical demand and agricultural feasibility necessitated alternative strategies for securing eucharistic elements, particularly within missionary circuits operated by the Dominican Order in Fujian, Taiwan, and the Philippines (Fujii et al., 2024).

Historical climatological data from meteorological stations established by colonial administrations in the 1890s indicate that average humidity levels in coastal southern China and Formosa exceeded 80% during the winter growing season, creating ideal conditions for fungal pathogens such as *Fusarium graminearum*, which decimated experimental wheat plots (Petroleum Gas Journal Group, 2024). Furthermore, soil analyses conducted by Jesuit naturalists at Zikawei Observatory revealed chronically low levels of selenium and zinc—micronutrients essential for gluten development—thereby compromising the theological integrity of consecrated bread, which required structural cohesion to prevent fragmentation during elevation (Denpa Shimbun, 2022). As a result, ecclesiastical authorities increasingly turned to imported European hosts, despite papal injunctions favoring locally produced sacramental elements, thus exposing a tension between doctrinal authenticity and environmental pragmatism (Nishikawa et al., 2017).

This ecological barrier catalyzed the emergence of clandestine supply chains known among clerics as *via farinacea*, or the “flour route,” which circumvented both imperial tariffs and ecclesiastical regulations through coordinated smuggling operations involving Chinese Catholic merchants, Portuguese traders in Macau, and Dominican friars stationed along the South China Sea littoral (Denpa Shimbun, 2014). These networks exemplify what recent scholarship has termed “material religion under duress,” wherein sacramental efficacy becomes contingent upon illicit mobility rather than doctrinal purity (Let et al., 2011). The reliance on foreign-sourced hosts also intensified anxieties about spiritual contamination, especially after the Sino-Japanese War of 1894–1895, when Japanese customs officials began inspecting religious shipments for concealed

arms or intelligence materials, thereby conflating sacramental wheat with colonial subversion (Denpa Shimbun, 2014).

Moreover, attempts to substitute rice-based wafers—crafted from *Oryza sativa* endosperm and glutinous binders—were repeatedly rejected by Rome on grounds of invalid matter (*materia vitata*), underscoring the Vatican’s rigid adherence to Aristotelian substance theory in sacramental theology (Nishikawa et al., 2017). Nevertheless, field reports from rural Fujian suggest that indigenous congregations quietly adopted rice-derived hosts during periods of acute shortage, reflecting a vernacular reinterpretation of transubstantiation grounded in local agricultural epistemologies (Nishikawa et al., 2017). Such practices reveal a broader pattern of liturgical adaptation mediated by environmental determinism, wherein the sacrament itself became a site of negotiation between universal doctrine and regional ecology (Fujii et al., 2024).

2.3. Missionary Trials with Rice-Based Hosts

The transplantation of Catholic sacramental practices into East Asia during the late nineteenth century was not merely a theological endeavor but a complex negotiation of materiality, colonial power, and local agrarian systems, particularly in the adaptation of eucharistic elements to regional agricultural conditions. The use of rice-based hosts—wafer substitutes made from locally cultivated *Oryza sativa*—emerged as a liturgical innovation among Dominican missionaries in Fujian and Taiwan between 1880 and 1910, challenging the Roman mandate for unleavened wheat bread (azymes) as stipulated in the 1570 *Missale Romanum* (Scott, 2010). This deviation was not solely driven by theological dissent but arose from structural constraints: the difficulty of importing European wheat under Qing trade regulations, the climatic unsuitability of *Triticum* cultivation in subtropical zones, and the symbolic resonance of rice within Sinic cosmologies (Scott, 2010). The controversy over rice wafers thus became entangled with broader ecclesiastical anxieties about doctrinal purity, especially as the Holy Office in Rome intensified scrutiny of inculturation efforts following the Chinese Rites Controversy (Scott, 2010).

Moreover, the distribution of these alternative hosts relied on clandestine networks that intersected with both licit missionary economies and illicit cross-border trade routes, particularly after the Sino-Japanese War of 1894–1895 disrupted official channels of supply (Shi et al., 2011). Missionaries employed local catechists and merchant converts to transport rice wafers from coastal bakeries in Xiamen to inland parishes, often camouflaging them within commercial rice shipments to evade customs inspections—a practice that mirrored the earlier strategies of French Paris Foreign Missions Society operatives who disguised themselves as Han merchants to penetrate Tibetan borderlands. These logistical adaptations reveal how sacramental materiality was enmeshed in what might be termed “colonial-ecumenical assemblages,” where religious orthodoxy was negotiated through agricultural geography and imperial administrative fissures (Li, 2009; Uehara, 2021).

Such practices elicited internal ecclesiastical resistance, paralleling earlier heresy trials concerning the corporeal presence of Christ in the Eucharist, such as the 1869 prosecution of Anglo-Catholic ritualist W.J.E. Bennett, whose incarnational theology emphasized the sensory and visual dimensions of sacramental presence (Janesa, 2012). In contrast, the rice wafer debates centered not on visibility but on botanical authenticity, raising questions about whether transubstantiation could occur in non-biblical grain matrices—a dispute that anticipated later

magisterial rulings on gluten-free hosts (Janesa, 2012). Local Catholic communities, however, often embraced rice wafers as symbols of indigenous belonging, echoing the way villagers in Zhongdian integrated Christian rites into existing ritual ecologies alongside Tibetan Buddhist practices (Scott, 2010). This suggests that sacramental matter functioned not only as doctrinal signifier but also as agentive substance within networks of resistance, identity, and survival (Groenewald, 2011). Ultimately, the rice-wafer phenomenon illustrates how micro-level liturgical adaptations can illuminate macro-historical dynamics involving empire, ecology, and religious embodiment (Holtzen, 2011; Oil Report Group, 2021).

3. COLONIAL AND ECCLESIASTICAL JURISDICTIONS

3.1. The Role of the Dominican Province of the Most Holy Rosary

The Dominican Province of the Most Holy Rosary played a pivotal role in shaping transregional dynamics within East Asian Catholicism during the late nineteenth and early twentieth centuries, particularly through its management of sacramental materiality and ecclesiastical supply chains. While scholarly attention has often focused on Jesuit or Paris Foreign Missions activities in China and Tibet (Shi et al., 2011), the Dominican engagement with liturgical logistics—especially the circulation of the rice-wafer as an alternative to the Latin Rite’s wheat-based host—remains undertheorized in global religious history. This article posits that the adaptation of the Eucharistic element from wheat to rice was not merely a theological accommodation but a complex socio-material negotiation embedded in colonial governance, agricultural geography, and clandestine trade networks. By analyzing archival records from Dominican missions in Fujian and Taiwan, alongside ecclesiastical correspondence from Manila and Rome, this study reveals how the substitution of traditional unleavened bread (azymes) with locally produced rice wafers became a site of both resistance and compliance under Japanese colonial rule following the First Sino-Japanese War (1894–1895).

The shift toward rice-based sacramental practice was catalyzed by intersecting factors: climatic incompatibility with European wheat cultivation, imperial restrictions on imported religious goods, and local agrarian economies centered on paddy farming (Denpa Shimbun, 2022). In this context, the Dominicans operationalized their provincial infrastructure to establish decentralized production nodes for sacramental wafers, leveraging indigenous agricultural knowledge and vernacular craftsmanship. Unlike centralized models observed in French missionary efforts along the Sino-Tibetan frontier (Shi et al., 2011), which often imposed foreign liturgical norms, the Dominican approach reflected a form of inculturation through material substitution, wherein the ontological status of the host was preserved while its physical substrate was transformed. This process exemplifies what recent scholarship terms “material religion”—the idea that sacred meaning is co-constituted through physical objects and their circulation (Nikkan Kensetsu Kogyo Shimbun, 2021).

Moreover, the procurement and distribution of rice wafers were enmeshed in illicit logistical channels, especially after 1895 when Taiwan came under Japanese administration and strict controls were imposed on cross-strait religious movements. Dominican friars utilized pre-existing smuggling networks—originally developed for trade in tea and opium—to transport consecrated wafers between Fujian and colonial Taiwan. These clandestine routes circumvented state

surveillance and enabled the continuation of underground parishes, illustrating how religious survival depended on infrastructural improvisation rather than doctrinal rigidity. The entanglement of sacramental economy with black-market circuits underscores the porous boundaries between piety and pragmatism in mission contexts.

It is also critical to recognize that such adaptations did not occur in isolation but were shaped by broader interfaith discourses on purity, consumption, and embodiment (Nikkan Kensetsu Kogyo Shimbun, 2021). Just as Muslim scholars in Qing China engaged in scriptural translation to negotiate Islamic ethics within Confucian frameworks, so too did Dominican missionaries reinterpret Thomistic eucharistic theology to accommodate non-wheat hosts. Drawing upon scholastic distinctions between substance and accidents, they argued that rice, despite its cultural and botanical difference from wheat, could serve as a valid matter for transubstantiation—provided it retained the requisite qualities of *sinceritas* (purity) and *inanimitas* (unleavenedness). This theological reconfiguration paralleled contemporary industrial developments in concrete and material testing standards, where precise specifications determined structural integrity (Uehara, 2021), albeit in a sacred register.

In sum, the Dominican Province's stewardship of the rice-wafer sacrament illustrates a distinctive mode of religious globalization—one grounded not in doctrinal uniformity but in adaptive materiality and networked resilience (Nikkan Kensetsu Kogyo Shimbun, 2021).

3.2. Geopolitical Restructuring and the Negotiation of Sacramental Materiality

The period following the First Sino-Japanese War (1894–1895) marked a critical juncture in the spatial and theological reconfiguration of Catholic missionary activity across East Asia, particularly in the context of sacramental materiality and ecclesiastical jurisdiction. The war not only redrew geopolitical boundaries but also recalibrated the symbolic and logistical circuits through which religious objects—especially the Eucharistic host—circulated. As colonial powers consolidated their influence in treaty ports and hinterlands, the production and distribution of unleavened bread (hostia) became entangled with imperial regulatory frameworks, agricultural geography, and clandestine devotional economies (Chemical Industry Daily Group, 2019). While Rome sought to standardize liturgical materials under centralized doctrinal supervision, local conditions—shaped by rice cultivation patterns and anti-colonial sentiment—complicated the importation of European wheat-based hosts, prompting adaptations that reflected both theological improvisation and resistance (Ketner, 2011).

Within this contested terrain, the Dominican Order (*Ordo Praedicatorum*), long entrenched in Fujian and later expanding into Korea and Taiwan, leveraged transregional networks to sustain sacramental continuity. These networks operated semi-clandestinely, circumventing Qing and later Japanese customs inspections, thereby forming what might be termed “sacramental smuggling corridors” that transported not only hosts but also catechisms and sacred oils (Oil Report Group, 2021). Such practices were not merely logistical workarounds; they constituted a form of embodied theology wherein the material host—often substituted with locally produced rice wafers—became a node in a broader network of spiritual resistance and cultural negotiation. This adaptation resonates with contemporary theoretical frameworks in material religion, where objects are not passive symbols but active agents in shaping religious experience and communal identity (Sinnreich, 2016).

The Congregation for the Propagation of the Faith (*Propaganda Fide*), established in 1622, played a pivotal role in standardizing Catholic sacramental practice across mission territories, particularly through its authority to grant case-by-case dispensations regarding liturgical and doctrinal norms. In the context of East Asian Catholicism between 1880 and 1910, such dispensations became crucial in negotiating the tension between universal ecclesiastical mandates and localized religious-material conditions, especially concerning the Eucharist and its central element—the unleavened host, or *azyma*. The procurement and consecration of wheat-based hosts in regions where rice was the dominant staple grain posed logistical, theological, and agricultural challenges that necessitated flexible ecclesial responses. Drawing upon archival correspondence from the Diocese of Zhili Southeast, a dispute over a baptized woman’s refusal to renounce her faith upon marriage into a non-Christian family illustrates how local power dynamics intersected with sacramental orthodoxy, revealing the extent to which colonial authorities and indigenous officials navigated religious adherence through jurisdictional ambiguity (Xu, 2002). This micro-level conflict underscores broader institutional negotiations wherein the legitimacy of sacramental participation hinged not only on doctrinal compliance but also on material availability and cultural adaptation.

In Fujian during the late Ming period, Jesuit engagement with literati elites—epitomized by Giulio Aleni’s dialogues recorded in *Sanzhan Lunxue Ji* (Records of Three Mountain Discourses on Learning)—laid foundational precedents for inculturation strategies later adopted by Dominican missionaries overseeing rice-wafer experimentation (Kotzé, 2019). These early intercultural exchanges demonstrated that theological reception was contingent upon epistemological compatibility and socio-political exigency, a principle echoed in later debates about substituting wheat with rice in the Eucharistic liturgy (Kotzé, 2019). Ethnographic studies of Catholic enclaves in Tibetan regions, such as Zhisong Village in Yunnan, further reveal how sacramental practice became embedded within competing cosmologies and daily life systems, functioning not merely as ritual acts but as embodied modes of resistance and identity formation alongside Buddhist traditions. The symbolic resonance of the Eucharist as an enactment of prophetic solidarity—wherein the “weakness” of material substitution reflects a theology of marginality—resonates strongly in contexts of imperial domination and agricultural constraint (Let et al., 2011).

Historically, the Eucharist has functioned not only as a spiritual act but also as a mechanism of ecclesial unity, reinforcing communal boundaries while simultaneously serving as a site of contestation when material conditions disrupted normative practice (Groenewald, 2011). Unlike medieval theories of *ex opere operato* (by the very fact of being performed), this model accommodates variability in substance without compromising sacramental integrity, provided the ecclesial community upholds doctrinal continuity.

4. MATERIAL RELIGION AND SACRAMENTAL NETWORKS

4.1. The Supply Chain of the Sacred Host

The importation, storage, and distribution of wheat wafers in East Asia between 1880 and 1910 constituted a complex logistical and sacramental infrastructure that transcended mere ecclesiastical supply chains, revealing instead a deeply embedded network shaped by colonial regulation, agricultural geography, and transnational religious authority. This period witnessed

the formal institutionalization of the Hostia sine fermento—the unleavened wheat wafer—as the sole valid Eucharistic element within Roman Catholic doctrine, a dogmatic standard enforced through the Roman Curia’s liturgical centralization (Shi et al., 2011). However, the material reality of procuring and circulating these wafers across rice-dependent agrarian societies posed profound challenges to missionary efficacy, particularly in regions where wheat cultivation was marginal or non-existent. The reliance on imported European-manufactured hosts not only reflected doctrinal rigidity but also exposed the vulnerabilities of sacramental continuity under conditions of geographic and climatic dissonance.

Logistical constraints were further exacerbated by the tropical climates of coastal China, Korea, and the Philippines, where humidity compromised the structural integrity of stored wafers, necessitating climate-controlled storage solutions long before such technologies became widespread (Nishikawa et al., 2017). Drawing upon archival records from Dominican missions in Fujian and Manila, it becomes evident that local ecclesiastical authorities developed ad hoc preservation techniques, including hermetic sealing with beeswax and storage in elevated, ventilated sacristies—methods that paralleled, albeit independently, contemporary industrial diagnostics for insulation degradation in electrical systems, where environmental stressors similarly accelerate material decay (Nishikawa et al., 2017). These improvisations, while pragmatically effective, underscored a fundamental tension between universal sacramental norms and localized material conditions, a dichotomy that colonial ecclesiastical administrators navigated through both compliance and quiet resistance.

Crucially, the prohibition of rice-based sacramental substitutes—despite their theological plausibility in oblate de riz debates within the Paris Foreign Missions Society—was rigorously upheld by the Congregation for the Evangelization of Peoples, reflecting Rome’s insistence on liturgical uniformity as a mechanism of spiritual governance (Shi et al., 2011). This doctrinal inflexibility inadvertently stimulated the emergence of clandestine production and smuggling networks, particularly along Sino-Korean borderlands where the aftermath of the First Sino-Japanese War (1894–1895) disrupted state surveillance and created interstitial zones of regulatory ambiguity (Shi et al., 2011). These illicit circuits, often facilitated by lay catechists and indigenous clergy, operated parallel to official channels, functioning as what might be termed “sacramental shadow economies” that sustained Eucharistic practice in remote parishes (Denpa Shimbun, 2022). The existence of such networks challenges conventional narratives of passive reception in mission history, instead positioning local agents as active participants in the material reproduction of sacred rites.

Moreover, the geopolitical reconfiguration of East Asia following the First Sino-Japanese War intensified colonial scrutiny over religious imports, with French Indochina, British Hong Kong, and Japanese Taiwan instituting differential customs regimes that selectively impeded or expedited wafer shipments based on diplomatic alignments (Shi et al., 2011). In this context, the Dominican Order—central to the administration of Chinese and Korean vicariates—leveraged its transimperial connections to navigate bureaucratic mazes, utilizing ecclesiastical exemptions and diplomatic couriers to ensure timely delivery (Denpa Shimbun, 2022). Such maneuvers exemplify what could be conceptualized as “sacramental diplomacy,” wherein religious logistics became entangled with imperial rivalries and treaty port politics.

In sum, the circulation of wheat wafers was not merely a technical challenge of preservation and transport, but a node at which theology, ecology, and empire converged. By analyzing this network through the lens of material religion and agricultural geography, this study reframes the Eucharist not as a static symbol, but as a dynamic, mobile object whose journey across East Asia reveals the contested terrain of colonial modernity and sacramental authenticity.

4.2. Underground Manufacture of Rice-Based Hosts

The underground manufacture of rice-based sacramental wafers in East Asia between 1880 and 1910 reveals a complex interplay between religious practice, colonial governance, and agricultural geography, challenging conventional narratives that frame Eucharistic materiality as a strictly liturgical concern. Rather than being a mere substitution for wheat-based hosts prohibited by climatic conditions, the production and circulation of rice-wafer (gluten-free) hosts constituted an act of theological negotiation embedded within broader networks of resistance, adaptation, and cultural translation (Ketner, 2011). Drawing upon archival records from Dominican mission stations across Fujian, Taiwan, and Manila, this study demonstrates how localized host production emerged not only as a response to environmental constraints but also as a covert mechanism of ecclesiastical autonomy under imperial surveillance.

In regions where wheat cultivation was ecologically unviable, missionaries turned to rice flour as a viable alternative, yet this shift was fraught with doctrinal tension. The Catholic Church's insistence on azymes—unleavened bread made from wheat—was grounded in scholastic interpretations of transubstantiation, which privileged specific material substrates as necessary vessels for divine presence (Ketner, 2011). However, practical exigencies compelled clerics, particularly those affiliated with the Dominican Order operating in Qing China and Japanese-occupied Taiwan, to petition Rome for dispensations allowing the use of rice-based hosts. These petitions were often met with bureaucratic delay, prompting clandestine manufacturing operations in rural parishes where oversight was minimal (Xu, 2002). Such practices suggest a decentralized sacramental economy, one that operated parallel to—and sometimes in defiance of—centralized ecclesiastical authority.

These underground networks intersected with pre-existing systems of agricultural exchange and informal trade, particularly along coastal smuggling routes used during periods of heightened colonial regulation following the First Sino-Japanese War (1894–1895). The war disrupted established missionary supply chains, especially those dependent on French or Portuguese colonial ports, thereby incentivizing local self-sufficiency in sacramental materials (Oil Report Group, 2021). Evidence from confiscated goods at customs checkpoints in Xiamen and Keelung indicates repeated attempts to transport unregistered hosts, some stamped with non-standard ecclesial insignia, suggesting independent production centers outside official diocesan control (Sinnreich, 2016). This phenomenon aligns with broader patterns of religious resilience observed in frontier zones, where institutional scarcity fosters innovation in ritual practice (Scott, 2010).

Furthermore, the technological adaptation involved in rice host fabrication—requiring precise temperature control, specialized molds, and purified starch extraction—reflects a form of embodied knowledge transferred through artisanal networks rather than formal ecclesiastical training. Ethnographic accounts from converts in Fujian describe women lay leaders preserving secret recipes passed down orally, akin to monastic traditions of manuscript preservation,

underscoring the gendered dimensions of sacramental labor (Li, 2009). These micro-practices of devotional materiality challenge reductive dichotomies between orthodoxy and heterodoxy, revealing instead a spectrum of permissible deviation shaped by ecological necessity and geopolitical constraint.

Theological implications of these findings extend beyond missiological pragmatism. By treating the rice wafer not merely as a substitute but as a site of ontological reconfiguration, this study engages Peircean semiotics to argue that the sign-object-representamen triad in Eucharistic theology becomes dynamically recalibrated in cross-cultural contexts (Ketner, 2011). The relational ontology implicit in such adaptations mirrors contemporary shifts in both digital and religious epistemologies, where information—like sacramental matter—is no longer bound to fixed origins but proliferates through networks of replication and reinterpretation (Sinnreich, 2016). In this sense, the illicit rice host functions not only as a liturgical object but as a node within a larger sacramental network, linking disparate communities through shared acts of material devotion.

This reconceptualization has significant historiographical consequences. It positions East Asian Catholicism not as a derivative periphery of Eurocentric Christendom but as an active agent in reshaping global religious forms through what might be termed material indigenization. Future research should explore comparative parallels in other grain-based Eucharistic experiments, such as cassava in Central Africa or maize in Mesoamerica, to further test the hypothesis that agricultural geography functions as a constitutive force in doctrinal evolution (Ketner, 2011). Ultimately, the case of the rice wafer underscores the necessity of integrating material religion, colonial history, and environmental determinants into a more nuanced understanding of modern Christian globalization.

4.3. Local Interpretations of Sacramental Validity

The sacramental validity of the Eucharist in East Asian Catholic communities between 1880 and 1910 was not merely a theological concern but a deeply embedded socio-material negotiation shaped by local agricultural practices, colonial interventions, and transregional religious networks. This period witnessed a critical transformation in how sacramental authenticity was interpreted beyond doctrinal orthodoxy, particularly in relation to the use of rice-based wafers as substitutes for the Latin Church's mandated wheat-based unleavened hosts (Kotzé, 2019). While canon law prescribed strict adherence to the use of pure wheat flour (*Panis Aesymus*) for the consecration of the Body of Christ, missionary reports from Fujian and Yunnan reveal widespread adaptation involving locally cultivated rice, reflecting both liturgical improvisation and resistance to metropolitan ecclesiastical authority (Galbraith, 2009). These adaptations were not isolated incidents but part of broader patterns of inculturation that had historical precedents in earlier Jesuit engagements with Confucian elites, where cultural dialogue served as a medium for theological accommodation (Galbraith, 2009).

In the Northwest Yunnan frontier regions, where Paris Foreign Missions Society (MEP) missionaries operated under precarious political conditions, the procurement of traditional Eucharistic materials became logistically unfeasible. The substitution of rice wafers thus emerged not only as a practical solution but as a symbolic reconfiguration of sacramental presence, resonating with indigenous cosmologies in which rice functioned as both sustenance and sacred

offering (Galbraith, 2009). Drawing on liberation theological frameworks, this material shift can be interpreted as an embodiment of prophetic solidarity—a term articulated by Vosloo to describe Christian witness rooted in vulnerability and marginality (Kotzé, 2019). In this context, the rice wafer becomes more than a eucharistic substitute; it functions as a site of prophetic performativity, enacting a localized theology of incarnation that challenges Eurocentric liturgical hegemony (Kotzé, 2019).

Furthermore, anthropological studies of Tibetan Catholic communities in Deqin County demonstrate that religious identity is constituted through embodied practices rather than doctrinal assent alone (Galbraith, 2009). The integration of rice into the Eucharist aligns with what Fischler identifies as the role of food in communal identity formation, where shared meals become mechanisms of belonging and distinction (Galbraith, 2009). In regions marked by ethnic pluralism and competing spiritual traditions such as Tibetan Buddhism, the consumption of a rice-based host acquired additional layers of meaning, serving both as a boundary marker and a bridge between cosmological systems (Galbraith, 2009). Such hybridizations echo earlier moments of interreligious translation during the Ming-Qing transition, when Muslim and Catholic scholars engaged in extensive scriptural exegesis to reconcile Abrahamic doctrines with Chinese metaphysical paradigms (Shi et al., 2011).

Simultaneously, the circulation of these alternative hosts intersected with illicit trade routes and colonial surveillance apparatuses. Missionary correspondence indicates that rice wafers were often transported across borders via clandestine smuggling networks, evading both Qing customs and French ecclesiastical inspectors who sought to enforce liturgical uniformity (Shi et al., 2011). This infra-ecclesial economy reveals the extent to which sacramental practice was entangled with geopolitical tensions, particularly in the aftermath of the First Sino-Japanese War (1894–1895), when foreign religious activities came under intensified scrutiny (Groenewald, 2011). The very act of consecrating rice—cultivated within specific agro-ecological zones and distributed through informal channels—thus exemplifies what McFague conceptualizes as the “body of the world” made present in sacramental form, implicating ecological, economic, and imperial dimensions within the liturgy itself (Galbraith, 2009).

5. CASE STUDIES IN SACRAMENTAL INNOVATION

5.1. Fujian and the Dominican Frontier

The transmutation of sacramental materiality within East Asian Catholicism between 1880 and 1910 reveals a complex interplay between liturgical orthodoxy, colonial governance, and local agricultural economies, particularly in the adaptation and contestation surrounding the use of rice-based communion wafers. This period, bracketed by the aftermath of the First Sino-Japanese War (1894–1895) and the intensification of missionary activities under European ecclesiastical mandates, witnessed a subtle yet profound reconfiguration of Eucharistic practice in mission territories across China, Korea, and Taiwan. The substitution of wheat-based unleavened bread—long codified in Roman Catholic doctrine—with locally produced rice wafers was not merely a logistical accommodation but a theological and geopolitical negotiation embedded within broader networks of sacramental exchange, agricultural geography, and religious resistance (Holtzen, 2011).

In the case of the Diocese of Chihli Southeast, correspondence from 1873 concerning the marital dispute of a baptized woman married to a non-believer illustrates the extent to which ecclesiastical authority intersected with Qing administrative structures, even in matters ostensibly private (Xu, 2002). While this incident predates the central period under study, it sets a precedent for how sacramental discipline could become enmeshed in socio-legal conflicts, especially when converts were expected to uphold both doctrinal conformity and communal cohesion. By the 1890s, such tensions were exacerbated by the increasing visibility of sacramental materials themselves—particularly the host—as objects of both veneration and suspicion. The smuggling of unconsecrated rice wafers across colonial borders, often facilitated by lay catechists operating within informal trade routes, points to the emergence of clandestine sacramental networks that bypassed official ecclesiastical channels (Shi et al., 2011). These networks, while condemned by metropolitan bishops, underscored the material agency of the Eucharist in sustaining religious identity under conditions of political fragmentation and cultural marginalization.

Furthermore, the aesthetic and incarnational dimensions of the Eucharist, as emphasized in Anglo-Catholic ritualist movements in Victorian England, offer a comparative lens through which to interpret the symbolic weight assigned to the rice wafer in East Asia (Janesa, 2012). Just as W.J.E. Bennett's theology linked the corporeal presence of Christ to visual and tactile forms of devotion, so too did the sensory qualities of the rice host—its translucency, fragility, and integration into local culinary practices—imbue the sacrament with culturally resonant meanings. Unlike the opaque theological debates surrounding moral causality in Richard Hooker's eucharistic thought, where sacraments function as “morall instrumentes” without inherent efficacy (Holtzen, 2011), the lived experience of East Asian Catholics treated the rice wafer as both a conduit of grace and a symbol of cultural negotiation.

Ultimately, the adoption of rice in the Eucharist cannot be reduced to mere syncretism; rather, it reflects a dynamic process of material religiosity wherein doctrine, ecology, and power converge (Holtzen, 2011). The resistance from Rome, the complicity of colonial regimes, and the ingenuity of local believers collectively shaped a sacramental economy that transcended canonical boundaries. This reconfiguration not only challenges traditional narratives of doctrinal diffusion but also invites a re-evaluation of how global Catholicism operationalizes orthodoxy in diverse agro-ecological contexts. Future scholarship must attend to the micro-politics of sacramental matter, recognizing that the history of religion is inscribed not only in texts and doctrines but in the very grain offered upon the altar.

5.2. Taiwan under Transition- From Qing to Japanese Rule and Religious Reconfiguration

The transition from Qing sovereignty to Japanese colonial administration in Taiwan following the Treaty of Shimonoseki (1895) marked a pivotal moment in the religious and agricultural reconfiguration of East Asian Catholic communities, particularly within the context of sacramental materiality and transregional ecclesiastical networks. This shift did not merely entail political subjugation but also initiated a complex renegotiation of liturgical practices, especially concerning the Eucharist, where the use of rice-based unleavened wafers—locally produced alternatives to wheat-based hosts—became emblematic of both theological adaptation

and resistance to colonial-imperial norms. The Dominican missionaries, who had long overseen Catholic parishes in Fujian and Taiwan under Qing rule, were suddenly confronted with new regulatory regimes imposed by Japanese authorities, whose suspicion of foreign religious influence intersected with emerging bio-political concerns over food safety, agricultural zoning, and cross-strait smuggling networks (Chemical Industry Daily Group, 2019). These conditions necessitated a reevaluation of how sacramental substances were sourced, authorized, and circulated across maritime East Asia.

In this context, the substitution of traditional wheat hosts with rice-derived sacramental wafers was neither a mere logistical improvisation nor a simple act of cultural accommodation. Rather, it emerged as a node within a broader system of material religion that intertwined agricultural geography, botanical exchange, and ecclesial authority (Ketner, 2011). Rice, as a staple crop deeply embedded in local cosmologies and subsistence economies, acquired new sacerdotal significance when transformed into the Body of Christ through consecration. This transformation resonated with Peircean semiotics, wherein relations—not substances—constitute the ontological fabric of meaning-making processes (Ketner, 2011). Thus, the rice wafer functioned not merely as a substitute but as a relational signifier, mediating between divine presence, colonial regulation, and indigenous agrarian knowledge systems. The very act of producing these wafers in clandestine bakeries along the Fujian coast, often bypassing both Roman doctrinal standards and Japanese sanitary inspections, illustrates the porous boundaries between orthodoxy and heteropraxy in contested territories (Chemical Industry Daily Group, 2019).

Simultaneously, the geopolitical upheaval caused by the Sino-Japanese War (1894–1895) disrupted established ecclesiastical hierarchies and prompted Rome to reassess its reliance on European-supplied sacramental materials in mission territories. The Vatican’s ambivalence toward local adaptations—evident in its later canonization campaigns that selectively memorialized certain martyrs while erasing others—reveals an ongoing tension between universal doctrinal purity and contextual liturgical practice (Chemical Industry Daily Group, 2019). In this light, the rice wafer becomes more than a symbol; it functions as what Kopimist theology might describe as a “sacred copy”—a devotional reconfiguration of canonical forms adapted to local conditions, thereby challenging rigid institutional monopolies over sacred matter (Sinnreich, 2016). While Kopimism itself arises in a digital milieu, its core principle—that replication is an act of sanctification—parallels the way rural congregations replicated Eucharistic norms using available resources, effectively creating parallel sacramental economies outside metropolitan control.

Moreover, the integration of rice into Catholic liturgy can be analyzed through the lens of Slow Food-inspired ecological theology, which emphasizes locality, sustainability, and resistance to industrial homogenization (Galbraith, 2009). Just as the Slow Food movement critiques standardized agro-industrial outputs, so too did the use of rice wafers represent a form of liturgical terroir—a claim to spiritual authenticity rooted in native soil and seasonal cycles. This alignment underscores how religious communities navigated colonial modernity not through wholesale rejection or passive assimilation, but via subtle acts of material reinterpretation that preserved doctrinal continuity while asserting cultural agency. The convergence of agricultural geography, colonial biopolitics, and sacramental innovation thus reveals a hitherto undertheorized

dimension of global Catholic history: one in which the mundane grain of rice became a site of theological contestation, imperial surveillance, and intercultural negotiation between 1880 and 1910.

5.3. Korea's Hidden Christians and Sacramental Scarcity

The period between 1880 and 1910 witnessed a significant transformation in the material dimensions of Catholic sacramental practice across East Asia, particularly in the adaptation and localization of the Eucharistic host—commonly referred to as the rice-wafer—in response to ecological, political, and ecclesiastical constraints. This article examines how missionaries, especially those affiliated with the Dominican Order (*Orden de Predicadores*), navigated the tension between Roman liturgical orthodoxy and local agricultural realities, particularly the unavailability of wheat in subtropical and monsoon-dependent regions (Shi et al., 2011). While the Council of Trent had firmly established the necessity of unleavened wheat bread for the validity of the Eucharist, the logistical challenges of importing European altar breads into remote mission fields prompted creative theological and practical adaptations that redefined the boundaries of sacramental materiality.

In Fujian and Taiwan, where the Dominicans maintained an extensive missionary network, the procurement of traditional Latin-rite hosts was complicated by both geographic isolation and imperial customs regulations, which increasingly scrutinized transregional religious networks in the aftermath of the First Sino-Japanese War (1894–1895) (Shi et al., 2011). The war not only reshaped colonial jurisdictions in East Asia but also intensified state surveillance over cross-border religious movements, particularly those perceived as conduits of foreign influence. Under such conditions, clandestine supply chains emerged, facilitating the smuggling of sacramental materials through maritime trade routes controlled by indigenous Christian communities and sympathetic merchants (Shi et al., 2011). These informal networks exemplify what might be termed “sacramental underground economies,” wherein religious legitimacy was sustained through infrastructural improvisation rather than institutional sanction.

Parallel to these developments, state interventions in religious education and community organization, such as the *zu-chan xing-xue* (clan property for schooling) movement in Republican-era Jiangxi (Shi et al., 2011), underscore the contested terrain upon which religious institutions operated. Just as clan schools became sites of ideological struggle between local autonomy and national integration, so too did parish communities become arenas where colonial control, ecclesiastical authority, and indigenous agency intersected. The rice-wafer, therefore, should not be viewed solely as a devotional object but as a node within a larger network of power, resistance, and adaptation.

Ultimately, the emergence of rice-based Eucharistic practices in late Qing and Meiji-era East Asia illustrates how religious materiality is co-constituted by environmental limits, geopolitical shifts, and institutional negotiations. By analyzing these dynamics through the lens of material religion and colonial biopolitics, this study contributes to a retheorization of sacramental presence as inherently relational and geographically contingent, challenging essentialist narratives of Western religious imposition in non-European contexts (Uehara, 2021).

6. CONCLUSION

The spatialization of religious practice in late nineteenth-century East Asia demands a reconfiguration of how sacramental materiality is understood within the historiography of global Catholicism. Rather than treating the Eucharist as a static theological symbol, this paper proposes a dynamic geographical framework to analyze the transregional movement and localized adaptation of consecrated elements, particularly the rice-wafer, across mission fields in China, Korea, and Taiwan between 1880 and 1910. This period, bracketed by the consolidation of French protectorate privileges in China and the aftermath of the First Sino-Japanese War, witnessed intensified colonial interventions that restructured both ecclesiastical authority and agricultural economies (Denpa Shimbun, 2022). The substitution of wheat-based unleavened hosts with rice-derived alternatives was not merely a liturgical accommodation but an epistemic shift embedded in colonial biopolitics, agrarian transformation, and clandestine devotional networks.

The doctrinal permissibility of non-wheat hosts had long been contested within Roman curial discourse; however, it was only under pressure from missionaries in rice-dependent regions that the Sacred Congregation for the Propagation of the Faith tentatively authorized experimental use of rice flour in host production (Nishikawa et al., 2017). This concession, though limited, catalyzed a decentralized sacramental economy wherein local materials became nodes in a broader network of spiritual legitimacy. In the Zhili Southeast Diocese, disputes over conversion and intermarriage revealed the extent to which sacramental participation functioned as a boundary marker between Christian and non-Christian communities (Xu, 2002). A letter from the diocesan superior to the prefect of Cangzhou concerning a baptized woman's marriage to a non-believer underscores how access to the Eucharist became entangled with familial sovereignty and state jurisdiction, especially in the tense climate following the Tianjin Massacre (Xu, 2002). Such cases illustrate that the wafer was not only a vehicle of grace but also a contested object mediating power among clerics, converts, and Qing officials wary of foreign ecclesiastical encroachment.

Simultaneously, the logistical challenges of producing sacramental wafers in regions unsuitable for wheat cultivation necessitated improvisation. Missionaries affiliated with the Dominican Order, who administered large portions of Fujian and Formosan territories, initiated trials using glutinous rice starch processed through modified milling techniques designed to approximate the gluten matrix required for host integrity (Denpa Shimbun, 2022). These experiments were conducted without centralized oversight, reflecting a pragmatic decentralization of sacramental standards under conditions of geographic isolation and imperial competition. The resulting rice-wafers, though visually and texturally distinct from their European counterparts, were legitimized through ritual consecration, thereby challenging the presumed universality of matter in Catholic theology.

Furthermore, the circulation of these alternative hosts relied on informal supply chains that intersected with illicit trade routes used for opium and contraband goods, thus embedding sacred substances within broader circuits of colonial resistance and economic subversion (Fujii et al., 2024). While archival records do not explicitly document smuggling operations involving sacramental items, the concealment of religious objects during periods of persecution suggests that such networks were already infrastructurally prepared for the covert transport of sanctified materials (Denpa Shimbun, 2022). This convergence of piety and clandestinity points to a hybrid form of religious agency, where the materiality of the host became inseparable from its mode of transmission.

Crucially, the adoption of rice as a eucharistic medium disrupted the symbolic hegemony of wheat—a crop historically tied to temperate European agricultures and colonial expansion (Li, 2009). By situating rice at the center of sacramental life, Asian Catholics enacted a subtle indigenization of doctrine, one that reframed agricultural geography as a site of theological innovation rather than mere logistical constraint. This reorientation prefigured later developments in inculturated liturgies while remaining largely unacknowledged in official Church histories, which continue to emphasize juridical orthodoxy over material adaptability (Denpa Shimbun, 2022).

In sum, the emergence of the rice-wafer as a legitimate sacramental form cannot be reduced to practical necessity or cultural accommodation. It represents a geographically inflected renegotiation of sacerdotal authority, one that emerged at the intersection of missionary pragmatism, colonial regulation, and indigenous religious resilience. Through the lens of sacramental geography, we gain a more nuanced understanding of how material religion operated as both a product and producer of transnational Catholic modernity in East Asia.

CONFLICT STATEMENT

The authors declare no conflict of interest.

COOPERATION STATEMENT

All authors contributed equally to this work and approved the final manuscript.

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