



Symbolic Congruence in Disaster Medicine: The Role of Royal and Customary Figures in Societal Resilience in the Face of Health Crises

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ABSTRACT

INTRODUCTION

Disaster medicine studies the capacity of societies to absorb, adapt to, and recover from health or humanitarian crises. Beyond infrastructure and medical protocols, resilience depends on collective trust, institutional legibility, and adherence to expected behaviours. This article proposes the concept of symbolic congruence to analyse how socially recognized figures may support societal resilience during crises.

METHODS

We conducted a narrative review of medical, legal, historical, anthropological, and institutional literature published or accessed between 2000 and 2026, supplemented by primary legal and historical sources where required. Sources were identified through targeted searches of biomedical and multidisciplinary databases, Google Scholar cross-searches, Consensus-assisted academic exploration, Perplexity-assisted grey-literature exploration, institutional repositories, legal and constitutional databases, and selected grey literature. Four contrasting case studies – the Rex Sacrorum, Charles X and Haiti, King Felipe VI, and Queen Alphonsine Kande – were analysed using a common framework centred on Legitimacy, Action, and Impact.

RESULTS

The cases studied show that symbolic congruence does not rest on a simple duality between symbolic legitimacy and legal legitimacy, but on the convergence of several registers of legitimacy perceived as coherent by populations. Depending on context, this convergence contributes to preserving ritual continuity, reducing political uncertainty, strengthening cohesion, fostering cooperation, or improving the acceptability of health measures, with indirect but significant effects on response effectiveness and resilience. The results also suggest that symbolic congruence may act as a regulatory mechanism for collective cognition. By fostering the construction of shared representations of risk, of institutions, and of expected responses, it would indirectly contribute to strengthening collective trust, cooperation, and societal resilience.

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DISCUSSION

Symbolic congruence appears as a mediator between legitimacy, collective cognition, trust, acceptability, and operational effectiveness. Its usefulness for disaster medicine lies in making visible how trusted local, customary, religious, constitutional, or institutional figures can support risk communication, counter disinformation, and restore cooperation when crises damage trust. The concept remains interpretive and requires further empirical testing through comparative studies and operational indicators.

INTRODUCTION

Disaster medicine focuses on societal resilience, defined by UNISDR (2015) as the capacity of a community to absorb, adapt to, and recover from a health or humanitarian shock – in other words, not to sustain irremediable damage [1]. This resilience depends not only on infrastructure or medical protocols, but also on the capacity of symbolic leaders to unite populations around collective measures.

In genomics, the concept of genetic and genealogical congruence, developed by READ (www.readdna.org) and validated by Hansen et al. (2022) as well as Carrara et al. (2022), has demonstrated its usefulness in establishing kinship links through the analysis of shared genetic variants, including short tandem repeats (STRs) and single-nucleotide polymorphisms (SNPs), and their cross-referencing with documented family trees [2,3]. This concept notably made it possible to identify the agnatic descendant of Charles X, illustrating how the alignment between biological markers and historical lineages can shed light on questions of filiation or hereditary risk [4,5,6].

In parallel, in comparative law, royal or customary figures – whether traditional (such as the Queen Mothers in the Democratic Republic of the Congo, DRC), constitutional (such as King Felipe VI in Spain), or symbolic (such as the Rex Sacrorum in ancient Rome) – see their legitimacy reinforced by legal recognition. In francophone Africa, texts such as the DRC's Law No. 15/015 (2015) or the Cameroonian decrees of 1933 and 1960 codify their status [7,21,22], while in Europe, modern constitutions (e.g. Spain, 1978, or France, 1958) define or authorise their symbolic and unifying role [8].

In this context, a central question emerges: how do these figures, through the convergence of several registers of legitimacy and their institutional recognition, produce a symbolic congruence – that is, a socially intelligible alignment between recognized legitimacy, visible action, and collective trust – capable of strengthening resilience in the face of health crises?

To address this, the present article offers a narrative review of the literature (2000–2026), structured around four emblematic case studies: the Rex

KEY MESSAGES

- Societal resilience to health and humanitarian crises depends not only on infrastructure and medical protocols but also on collective trust and institutional legibility; the genetic and genealogical congruence framework has separately shown how convergent lines of evidence establish credible kinship claims.

- This review introduces symbolic congruence, a framework describing how the convergence of recognized legitimacy, visible action, and observable trust allows royal or customary figures to act as operators of coherence during crises, illustrated across four historically and geographically contrasting cases.

- The framework offers disaster medicine planners a rationale for integrating traditional and symbolic leaders into risk communication and response strategies, and proposes new avenues for interdisciplinary research linking legitimacy, collective cognition, and resilience.

Sacrorum in ancient Rome; Charles X and Haiti; King Felipe VI during the floods in Catalonia (2024); and Queen Alphonsine Kande in the management of the Ebola epidemic in Ituri (2026). The aim is to show how their legal recognition and their symbolic role combine to produce concrete effects on social cohesion and disaster management.

METHODS AND THEORETICAL FRAMEWORK

This article is based on a narrative review designed to clarify and illustrate a conceptual framework rather than to produce a quantitative synthesis. In accordance with international expectations for transparent health-research reporting, the search strategy, source selection, and limits of the review are stated explicitly, while a detailed search strategy is proposed for supplementary material.

Sources were searched between June 2025 and June 2026 for material published or relevant to the period 2000–2026. The search combined biomedical databases and indexes (PubMed/MEDLINE where applicable), multidisciplinary academic sources, Google Scholar cross-searches, Consensus-assisted academic exploration, Perplexity-assisted grey-literature and source-discovery searches, institutional repositories, legal and constitutional texts, public-health agency publications, and selected grey literature. Legal and institutional searches were conducted through illustrative, non-exhaustive sources such as Légifrance for French law, EUR-Lex and European Union legal portals for European law, the digital library of the Organisation for the Harmonisation of

Business Law in Africa (OHADA) and related OHADA documentation platforms for francophone African business and institutional law, RDC legal repositories including the Journal officiel and Leganet where relevant, constitutional repositories, official gazettes, ministerial legal pages, and national legal databases of the countries concerned. The search focused on disaster medicine, societal resilience, trust, community engagement, customary authority, monarchy, symbolic legitimacy, collective cognition, Ebola, floods, and institutional recognition. AI-assisted search tools were used only to broaden source identification and cross-check retrieval paths; final selection relied on verifiable academic, legal, institutional, or clearly identified grey-literature sources.

Included sources were those that contributed directly to one of four aims: defining resilience and disaster-medicine relevance; documenting legal or institutional recognition of royal, customary, or symbolic figures; describing crisis contexts and community trust; or supporting the theoretical link between legitimacy, collective cognition, cooperation, and resilience. Exclusion criteria were: sources without identifiable authorship or institutional responsibility when used for factual claims; sources unrelated to disaster medicine, public health, law, anthropology, or crisis governance; duplicate materials; and media sources that did not add information unavailable from academic or institutional sources. Where media or commemorative sources were retained, they were used to document contextual, historical, legal, or reception dimensions, rather than as standalone evidence of the operational effectiveness of symbolic congruence.

1.1 THEORETICAL FRAMEWORK: FROM GENETIC CONGRUENCE TO SYMBOLIC CONGRUENCE

The concept of genetic and genealogical congruence was formalized within the work of READ (www.readdna.org), which gave rise to COGGEN-Afrique, a pioneering project in bioethics and genomics in francophone Africa, currently being deployed. As

Hansen et al. (2022) emphasise in their seminal study published in the *Revue de Gériatrie*, this concept rests on the alignment between shared genetic variants (such as Short Tandem Repeats, or STRs, on the Y chromosome) and documented genealogical lineages, making it possible to establish kinship links with a high statistical probability [2]. For example, the analysis of more than 16 alleles shared among descendants of the Bourbon lineage made it possible to confirm kinship with a probability greater than 99.99% [3].

A striking historical application of this method was the identification of the agnatic descendant of Charles X – the last King of France of the senior Bourbon branch – in the person of Mr Jean-Philippe Carpentier. Thanks to modern sequencing techniques and comparison with reference genetic profiles, researchers were able to establish a direct link between the president of the consular corps of Normandy – a lawyer and consul of Luxembourg – and the French royal lineage, thereby confirming the usefulness of genetic congruence in resolving historical or medical enigmas [4,5,6].

This work, relayed by specialized media such as *Forbes Afrique* and *Santé Mag*, also underscores the importance of genetic data sovereignty in Africa, a key issue for projects such as READ DNA, which aim to avoid population biases in genomic research [4,5,6].

1.2. PROPOSING THE CONCEPT OF SYMBOLIC CONGRUENCE

By analogy with genetic and genealogical congruence, we propose the concept of symbolic congruence to describe a mechanism of social coherence in times of crisis: the alignment between a recognised legitimacy, a visible and comprehensible action, and an observable effect of trust or adherence within the social body. This mechanism may in turn foster cooperation, the acceptability of measures, and, ultimately, societal resilience.

The conceptual relationships between legitimacy, symbolic congruence, collective cognition, trust, crisis-response effectiveness, and societal resilience are summarized in **Figure 1**.



FIGURE 1 - Conceptual diagram of symbolic congruence in disaster medicine.

The figure should show the articulation between recognized legitimacy, visible and comprehensible action, symbolic congruence, collective cognition, collective trust, crisis-response effectiveness, and societal resilience. It should also highlight how symbolic congruence may operate as a practical translation of the confront-regulate-transcend metamodel drawn from cindynics into disaster-medicine preparedness and response.

1. Recognized legitimacy: whether traditional (e.g. customary designation), constitutional (e.g. parliamentary monarchy), historical (e.g. religious role in Antiquity), customary, technical, or symbolic (e.g. agnatic descendant of the Bourbons).

2. Visible and comprehensible action: the measures taken to manage the crisis (e.g. community communication, clinical supervision, ritual, diplomatic, or cultural mediation) must be legible and perceived as coherent with the position of the figure concerned.

3. The effect of trust, adherence, or stabilisation: the observable effects may concern societal cohesion, adherence to health measures, cooperation between actors, institutional stability, or, more indirectly, response capacities.

This concept makes it possible to analyse how figures such as Queen Alphonsine Kande or King Felipe VI transform their symbolic legitimacy into levers of effective action, drawing on a legal recognition that reinforces their credibility in the eyes of populations.

1.3. LEGAL RECOGNITION: THE FOUNDATION OF LEGITIMACY

Symbolic congruence cannot be fully expressed without the legal or institutional recognition of the figures who embody it – although the underlying alignment of legitimacy, action, and trust may already exist, in latent or informal form, within collective memory and representations. This recognition takes varied forms depending on historical and geographical contexts, but it always constitutes a prerequisite for their authority to be accepted and for their actions to have a lasting impact.

In republican Rome, the Rex Sacrorum was designated by the College of Pontiffs, a religious institution integrated into the Roman political system. Although devoid of political power, his role was recognized by the institutions as essential for maintaining social stability through traditional rites [11].

In the Democratic Republic of the Congo, Law No. 15/015 of 25 August 2015 establishes the status of customary chiefs, conferring on them explicit responsibilities in matters of social cohesion, conflict mediation, and the protection of traditional values (Article 10) [7]. Customary chiefs are recognized there by the public authorities after designation according to local custom (Article 6), and their role is integrated into territorial administration. This law, analysed by Melone (1986) and Mback (2000), illustrates how the modern state can draw on traditional structures to strengthen local governance, particularly in times of crisis [21,22].

In Cameroon, traditional chiefs are officially integrated into the public administration through texts such as Order No. 244 of 4 February 1933 or the law of 10 December 1960, which organize their status and prerogatives [21]. They are also brought together

within the Higher Council of Traditional and Customary Authority, a consultative body that allows their action to be coordinated with the public authorities [22].

In Togo, the Constitution explicitly recognizes traditional chieftaincy as the guardian of customs and traditions (Article 22).

In Spain, the 1978 Constitution (Article 56) defines the King as the symbol of national unity and the arbiter of institutions, with a strictly apolitical yet central role in times of crisis [8]. This legal framework allows the monarch to act as a neutral and unifying figure, capable of transcending political divisions in order to bring the nation together.

In French law, the situation is more ambivalent. The Constitution of 4 October 1958 does not expressly recognize customary kings as such. However, through Article 75, which preserves particular personal statuses for citizens who have not renounced them, it maintains a constitutional space within which pre-existing customary orders may persist. In the colonial and postcolonial transition, several customary royal or chiefly authorities had previously benefited from forms of legal, administrative, or institutional recognition, even if this recognition was uneven, territorially specific, and not always codified in the same way. The contemporary status of Wallis and Futuna, established by Law No. 61-814 of 29 July 1961, may thus be understood as a distant but explicit legal echo of this broader historical ambivalence: the three traditional kingdoms of Uvea, Alo, and Sigave continue to exist within the institutional organisation of the French Republic, without possessing sovereignty distinct from it.

Implications for symbolic congruence: Legal legitimacy allows royal or customary figures to move beyond their symbolic role in order to act concretely (e.g. crisis communication, social mediation). Without this recognition, their capacity to align legitimacy, action, and impact remains to be explored.

RESULTS: CASE STUDIES ILLUSTRATING SYMBOLIC CONGRUENCE

Major health crises frequently reveal the interweaving of biological, social, political, and symbolic vulnerabilities. The royal or customary figures studied below intervene not principally as holders of decision-making power, but as operators of coherence capable of restoring or maintaining the conditions of trust necessary for collective resilience. In the present work, we propose the concept of symbolic congruence as an analytical framework allowing us to study the alignment between a socially recognized legitimacy, an action visible and comprehensible to the population, and an observable stabilising effect in a crisis context.

2.1. REX SACRORUM (ANCIENT ROME, 5TH–3RD CENTURIES BCE): SACRALITY, SYMBOLIC CONTINUITY, AND SOCIAL STABILITY

The Roman Republic (509–27 BCE) was marked by recurrent political tensions, social conflicts between patricians and plebeians, and external threats liable to affect the cohesion of the city. In this context, the rex sacrorum (“king of sacred things”) constitutes a particularly illuminating example of institutional dissociation between political power and symbolic function. The Roman Republic was built on the rejection of kingship, associated in civic memory with the tyranny of Tarquin the Proud. His expulsion, traditionally dated to 509 BCE, led to the establishment of a republican regime founded on collegial and temporary magistracies – notably the two consuls – designed to prevent any lasting concentration of power.

This political rupture, however, was not accompanied by a total symbolic rupture. Concerned to preserve the religious continuity of the city and the pax deorum, an essential condition of collective prosperity according to Roman representations, the Republic maintained an institution inherited from the former monarchy: the rex sacrorum. Deprived of all civil, judicial, or military authority, he nevertheless retained the royal title and assumed the ritual functions formerly exercised by the king. This institutional solution made it possible to neutralize monarchy as a form of government while preserving its symbolic and sacred dimension.

The rex sacrorum is therefore not a holder of power, but a guarantor of continuity. His existence recalls that societies are not structured solely around administrative or coercive institutions; they also rest on narratives, rites, and collective representations that ensure the coherence of the social body. In republican Rome, the sacred does not constitute a sphere separate from the political. On the contrary, it represents one of its foundations of legitimacy. The maintenance of a royal figure deprived of power but invested with a ritual function reflects the implicit recognition that a political community cannot durably stabilize itself without symbolic devices capable of embodying its historical continuity and its moral unity.

This reading holds particular interest for the contemporary analysis of societal resilience. Major crises, especially health crises, do not merely test the operational capacities of institutions; they also weaken the systems of representation that allow populations to make sense of collective ordeal. From this perspective, the rex sacrorum may be interpreted as a figure of symbolic congruence: his institutional legitimacy, his ritual function, and his social recognition converge to maintain a link of coherence between the political order, the symbolic order, and the community order. The effectiveness of this function lies not in the exercise of decision-making power, but in its capacity to render visible and intelligible the permanence of the collective beyond crises and institutional transformations.

His designation according to the procedures of Roman public religion, and his insertion into the juridico-religious system of the city, confer upon him an official legitimacy, despite the absence of executive power.

Symbolic congruence

- **Legitimacy:** institutional heir to the sacred functions of the former kingship, recognized by the religious authorities of the city.
- **Action:** performance of the rites guaranteeing symbolic continuity between the monarchical past and the republican order.
- **Impact:** preservation of cultural cohesion, reinforcement of the sense of collective belonging, and stabilisation of the social system in periods of uncertainty.

2.2. CHARLES X AND HAITI (1825): RECOGNITION AS A FACTOR OF SOCIETAL STABILISATION

The Haitian example highlights a second dimension of symbolic congruence: the capacity of a recognized authority to produce a framework of legitimacy liable to reduce political uncertainty and its social consequences. After its independence, proclaimed in 1804, Haiti remained for two decades in a situation of diplomatic ambiguity that weakened its international relations, its economic development, and the consolidation of its institutions. In this context, the ordinance of 17 April 1825 by which Charles X officially recognized the independence of Haiti constitutes an act whose scope extends far beyond its legal dimension.

The economic consequences of the indemnity imposed on Haiti are today the object of legitimate and documented criticism. Nevertheless, independently of any judgement passed on its fairness, this episode reveals an essential mechanism: institutional recognition by an authority invested with strong symbolic legitimacy can contribute to stabilising an environment marked by uncertainty. As King of France, Charles X then embodied a historical and legal continuity whose word possessed a validating value recognized by the other powers of the era.

This function of recognition has implications that extend beyond the diplomatic field alone. From the perspective of disaster medicine, it is important to make explicit the causal chain by which prolonged political uncertainty can produce indirect but major health effects: political instability – economic instability – institutional weakening – potential degradation of health capacities. In the Haitian case, the absence of international recognition of the independent state until 1825 sustained a situation of political and diplomatic fragility liable to durably hinder administrative organisation, the circulation of resources, and the consolidation of infrastructure [9,10,12,13]. This fragility was moreover set within a context inherited from the war of liberation (1791–1804), which had contributed to decimating part of the population, destroying essential

infrastructure, and degrading living conditions, at a time when endemic tropical diseases such as yellow fever and malaria prevailed [9,10]. In such a configuration, political instability is therefore not merely a diplomatic matter: it can foster lasting economic instability, weaken institutions, and compromise – at least potentially – the health capacities of an already vulnerable society. Conversely, clarifying the political status of a community contributes to strengthening the conditions necessary for the organisation of public services, the circulation of resources, and collective trust. The monarchical figure acts here as an operator of legitimisation, making it possible to transform a *de facto* situation into a recognized institutional framework. Symbolic congruence is then manifested through the convergence between recognized authority, act of validation, and stabilisation of the social system, with indirect but important implications for health resilience [9,10,12,13].

Symbolic congruence

- **Legitimacy:** sovereign authority recognized by French institutions and international powers.
- **Action:** official recognition of a new state through a legally and symbolically admissible act.
- **Impact:** reduction of political uncertainty and reinforcement of the conditions for institutional, social, and health stabilisation.

2.3. FELIPE VI (SPAIN, 2024): SYMBOLIC COHESION AS A CRISIS-MANAGEMENT RESOURCE

The example of King Felipe VI illustrates a third function of symbolic congruence: the maintenance of collective cohesion when disaster strikes in a context of political fragmentation. The floods that struck Catalonia in November 2024 caused significant loss of human life and considerable material damage. They occurred, however, in an environment already weakened by persistent tensions between the central Spanish government and Catalan independence movements.

Yet the consequences of a disaster depend as much on the physical vulnerability of populations as on the capacity of institutional and community actors to cooperate. When political divisions become dominant, they can impede the circulation of information, slow relief efforts, and weaken adherence to protective measures. In this context, the constitutional function of the King takes on particular importance. Article 56 of the Spanish Constitution defines him as the symbol of the unity and permanence of the state.

The King's visits to the disaster-stricken areas and his appeals for national solidarity do not derive from any power of command. Their effectiveness rests on their capacity to recall the existence of a community of destiny transcending partisan oppositions. The constitutional monarchy acts here as a shared symbolic space allowing collective attention to be temporarily redirected towards the humanitarian emergency. From

the perspective of disaster medicine, it is nevertheless appropriate to make explicit the mechanism by which this symbolic cohesion can produce indirect but concrete health effects: cohesion cooperation response effectiveness → reduction of health consequences. Indeed, when minimal trust between institutions, emergency services, and the population is restored, the circulation of information becomes more fluid, inter-institutional coordination more acceptable, and adherence to protective instructions more probable. This increased cooperation then fosters a faster, more legible, and better-coordinated response, liable to limit evacuation delays, failures of assistance, and prolonged exposure to disaster-related risks [8,14,15]. Symbolic congruence thus results from the alignment between the institutional legitimacy of the sovereign, his visible action among affected populations, and the restoration of a minimum of social cohesion necessary for the effectiveness of the collective response and, indirectly, for the reduction of health consequences [8,14,15].

Symbolic congruence

- **Legitimacy:** constitutional foundation and institutional neutrality.
- **Action:** presence among disaster victims and mobilisation of a unifying discourse.
- **Impact:** reinforcement of social cohesion and improvement of the conditions for cooperation in the face of disaster.

2.4. QUEEN ALPHONSINE KANDE (DRC): SYMBOLIC CONGRUENCE IN THE SERVICE OF HEALTH EFFECTIVENESS

The case of Queen Mother Alphonsine Kande constitutes the culmination of this analytical progression. Whereas the preceding examples show how symbolic congruence contributes to stabilising a political or social order, this situation demonstrates its direct effect on the effectiveness of the health response itself.

During the epidemic episodes affecting the east of the Democratic Republic of the Congo, the fight against Ebola came up against not only biomedical constraints but also phenomena of mistrust, disinformation, community resistance, and at times armed insecurity. The health crisis thus developed in an environment where medical, social, cultural, and political vulnerabilities reinforced one another.

In this context, Alphonsine Kande benefits from a particularly remarkable dual legitimacy. As Queen Mother of the Bajila Kapumbu, she holds a customary authority recognized by local communities and integrated into the Congolese legal framework. As a health professional and a manager of field medical activities, she simultaneously possesses technical expertise directly related to the management of health emergencies.

This convergence of legitimacies allows her to occupy a position of interface between populations, health authorities, and humanitarian organisations.

Her action does not consist solely in disseminating prevention messages. She contributes to translating medical recommendations into a culturally intelligible register, to reducing community resistance, to strengthening the acceptability of care arrangements, to facilitating the early referral of suspected cases to specialized structures, and to identifying particularly vulnerable subpopulations, such as women and girls of childbearing age.

This interface position echoes De Heusch's (2000) analyses of the metaphors of symbolic kinship in Central Africa. As shown by the alliances between the kingdoms of Kongo, Loango, Ngoyo, and Kakongo – where Loango was defined as “the husband,” Kakongo as “the wife,” and Ngoyo as “the priest” – customary figures act as nodes of coherence within an interconnected political space. Queen Alphonsine Kande, by combining traditional authority and medical expertise, embodies this capacity to translate institutional logics into socially intelligible actions, while maintaining a link with the invisible forces (ancestors, local cosmology) that underpin collective trust. Her role recalls that of the sovereigns of Kongo, whose legitimacy rested on a magical charge (relics, rituals) guaranteeing continuity between past and present [16].

Symbolic congruence here attains its most operational expression. The trust attached to the customary figure strengthens the credibility of scientific discourse, while medical expertise confers upon traditional authority a concrete capacity for action in the face of the health threat. From the perspective of disaster medicine, it is appropriate to make explicit the chain by which this interface position can produce tangible health effects: trust → acceptability → countering disinformation → community engagement → health effectiveness. Indeed, trust fosters the acceptability of prevention recommendations and of triage, isolation, or vaccination arrangements; this acceptability reduces the space within which rumours and competing interpretations of the disease circulate; countering disinformation in turn facilitates more active community engagement in the early detection of cases, referral to care structures, and adherence to protective measures [7,17–20]. The alignment between social legitimacy, technical competence, and field action thus produces a concrete effect on collective behaviours – an essential condition for the effectiveness of prevention and epidemic control strategies and, more broadly, for health resilience [7,17–20].

Symbolic congruence

- **Legitimacy:** customary recognition and health expertise.
- **Action:** community communication, cultural mediation, and supervision of care pathways.
- **Impact:** improved adherence to health measures, reduction of diagnostic delays, and reinforcement of collective trust.

Taken together, these examples suggest that

royal or customary figures exercise less a function of government than a function of coherence. In contexts where health crises intertwine with political, social, or identity-based tensions, their contribution lies in their capacity to articulate several registers of legitimacy simultaneously. They thus constitute operators of symbolic congruence, making it possible to maintain or restore the conditions of trust without which no durable societal resilience is possible.

DISCUSSION

The four case studies presented illustrate how symbolic congruence – understood as the alignment between a recognized legitimacy, a visible action, and a socially observable effect of trust or adherence – enables royal or customary figures to strengthen societal resilience in the face of crises. However, this congruence cannot be fully expressed without prior legal or institutional recognition, which confers upon these figures the credibility necessary to act.

The case of the rex sacrorum first shows that a symbolic figure, though devoid of political power, can support crisis governance when it is institutionally recognized. By ensuring ritual and moral continuity, it preserves a shared framework of meaning and legitimacy, indispensable for maintaining collective trust and limiting social disorganisation in periods of uncertainty.

The case of Charles X extends this reasoning by showing that a legally recognized authority can, through an act of institutional validation, reduce political uncertainty. In disaster medicine, this reduction of uncertainty constitutes a central issue of crisis governance: it fosters the legibility of institutions, strengthens trust in the collective order, and creates an environment more conducive to adherence to public decisions and to the maintenance of response capacities.

The case of Felipe VI then shows that a symbolic figure – neutral and recognized by the institutions – can transform this legitimacy into a resource for risk communication and cohesion. Through his presence in the field and through a unifying discourse, he can contribute to restoring the minimal conditions of trust necessary for cooperation between authorities, emergency services, and populations. In disaster medicine, this cooperation constitutes a decisive variable of operational effectiveness: it facilitates the circulation of information, improves the coordination of the response, and fosters adherence to protective instructions. Thus, the chain cohesion → cooperation → response effectiveness → reduction of health consequences makes it possible to link more explicitly the sovereign's symbolic intervention to the health issues specific to disasters.

The case of Queen Alphonsine leads, finally, to

the demonstration most directly linked to disaster medicine. Because she combines customary legitimacy and technical competence, she can convert the trust granted to her person into acceptability of prevention and care arrangements, and then into stronger community engagement against disinformation and local resistance. This case thus makes it possible to render explicit a second chain of effects: trust → acceptability → countering disinformation → community engagement → health effectiveness. Symbolic congruence therefore appears here not only as a factor of cohesion, but as a concrete lever of operational effectiveness in public health, supporting early detection, referral to care, and adherence to epidemic control measures.

From the standpoint of disaster medicine, these cases show that the effectiveness of a response depends not solely on the material resources or technical competences mobilized. It also depends on the capacity of institutions to preserve or restore the collective trust that enables adherence to measures of protection, prevention, and care.

This reading can be extended by an opening towards the theory of risk and disaster. Symbolic congruence could indeed be interpreted as a

mechanism for reducing dissonances between collective representations of risk and the institutional arrangements charged with managing it. When a recognized figure or institution renders the threat more intelligible and the response measures more acceptable, it fosters collective trust, improves risk perception, and strengthens adherence to expected behaviours. Conversely, when this congruence is broken, phenomena of mistrust, disengagement, or resistance may increase the vulnerability of the social system and diminish the effectiveness of the response. From this perspective, symbolic congruence appears as a mediator between legitimacy, trust, acceptability, and resilience.

3.1. COMMON FEATURES ACROSS THE CASE STUDIES

Indeed, the cases studied clearly suggest the existence of an intrinsic emergent property of social systems confronted with certain critical situations: the capacity to make several registers of legitimacy converge towards a shared representation of the situation. This comparative synthesis is summarized in **Table 1**. It is precisely this property that we propose to designate by the term symbolic congruence.

TABLE 1 - Comparative synthesis of symbolic congruence across the four case studies

Figure	Type of legitimacy	Legal recognition	Crisis context	Symbolic congruence mechanism	Societal impact	Ref.
<i>Rex Sacrorum</i>	Symbolic/Sacred	Designation by the College of Pontiffs	Political crises in Rome	Calming rituals and institutional neutrality	Preservation of social cohesion and symbolic continuity	[11]
<i>Charles X</i>	Monarchical	Coronation at Reims and sovereign authority	Political instability in an independent but unrecognized Haiti	Institutional validation reducing political uncertainty	Institutional stabilization and reduction of diplomatic uncertainty	[9,10,12,13]
<i>King Felipe VI</i>	Constitutional	Spanish Constitution, Article 56	Floods in Catalonia, 2019	Restoration of trust and facilitation of cooperation in a polarized context	Reinforcement of cohesion and improved conditions for cooperation	[8,14,15]
<i>Queen Alphonsine Kande</i>	Customary and technical	Law No. 15/015, DRC, 2015	Ebola outbreak, Ituri	Cultural translation of measures, acceptability, and community engagement	Improved adherence, earlier referral, and health-related trust	[7,17-20]

The table compares each figure according to type of legitimacy, legal or institutional recognition, crisis context, symbolic-congruence mechanism, societal impact, and supporting references.

Cross-cutting analysis:

- **Legitimacy:** In every case, the legitimacy of the figures studied rests on a legal, institutional, or customary recognition that grounds their authority in the eyes of populations.

- **Action:** Their actions are adapted to the crisis context (rites, negotiation, communication, clinical supervision) and aligned with their symbolic role.

- **Impact:** Their intervention has a measurable impact on social cohesion, political stability, or health management.

3.2. LIMITATIONS AND CHALLENGES

Despite the common features observed, several limitations must be underlined:

- **Cultural biases:** Acceptance of traditional leaders varies considerably across contexts. For example, customary chiefs in the DRC benefit from strong legal recognition, whereas in Europe, constitutional monarchies must often negotiate their role with democratic institutions.
- **Lack of quantitative data:** Few studies directly measure the impact of symbolic leaders on resilience. Existing works (e.g. Vinck et al., 2019; Mwaka et al., 2020) focus above all on qualitative indicators (e.g. adherence to health measures, social cohesion) [19,20].
- **Subjectivity of narrative reviews:** Narrative reviews are useful for synthesizing complex, innovative, or insufficiently systematized topics, but they are based on a non-systematic selection and interpretation of the literature [36]. The conclusions drawn here are therefore interpretive and should be complemented by comparative empirical studies and, where feasible, quantitative analyses.

3.3. IMPLICATIONS FOR DISASTER MEDICINE

The lessons drawn from these case studies have practical implications for disaster medicine, particularly in contexts where traditional leaders play a key role:

- **Integrate traditional leaders into response plans:** In the DRC, Queen Mothers such as Alphonsine Kande could be trained in risk communication in order to improve adherence to health measures, including infection prevention and control (IPC) measures and vaccination.
- **Strengthen legal recognition:** In countries where customary chiefs are not yet integrated into legal frameworks (e.g. certain West African countries), reforms could be envisaged to clarify their status and their role in times of crisis.
- **Develop indicators of symbolic congruence:** Tools could be created to measure the impact of traditional leaders on resilience, for example through perception surveys or rates of adherence to health measures.
- **Extend the concept to other contexts:** Symbolic congruence could be studied in other crises (e.g. COVID-19 in Africa, natural disasters in Asia) or for other types of leaders (e.g. religious leaders, military commanders).

3.4. SYMBOLIC CONGRUENCE AND COLLECTIVE COGNITION: AN INTEGRATIVE PERSPECTIVE

The notion of symbolic congruence can be enriched by contributions from cognitive psychology and from work devoted to collective cognition. Whereas individual cognition designates the processes by which a person perceives, interprets, memorises, and uses information to guide their decisions and behaviours,

collective cognition refers to the way in which human groups construct, share, and update common representations of their environment [23], of the risks they face, and of the responses they deem appropriate [24]. In crisis situations, the capacity of populations to perceive, understand, and anticipate the dynamics of the environment – what Endsley (1995) terms situation awareness – is essential for an effective response [25]. This situational awareness depends largely on the clarity and coherence of the available information, as well as on the trust granted to institutional actors. Symbolic congruence, by aligning legitimacy, action, and trust, contributes to structuring this collective awareness, thereby reducing cognitive dissonances and fostering adapted behaviours.

This approach follows on from work devoted to mental representations, natural-language reasoning, and the construction of individual and collective knowledge [26,27].

In disaster situations, the behaviours observed do not depend solely on the objective characteristics of the health crisis or on the resources available [28]. As Comfort et al. (2010) emphasize, societal resilience also rests on mechanisms of coordination and adaptation that allow institutions and communities to adjust to shocks [29]. They also rest on the way in which populations interpret events, assess the credibility of the information they receive [30], and attribute legitimacy to the actors involved in crisis management.

A disaster may thus be regarded not only as a health or material event, but also as a disruption of the collective systems of representation that ordinarily allow individuals to understand their environment and to act coherently within it.

When collective representations become contradictory or unstable, phenomena of mistrust, disinformation, social polarisation, or rejection of the proposed measures may appear [29]. Conversely, when several sources of legitimacy converge towards the same message or the same orientation, populations have at their disposal a more stable interpretive framework, facilitating the coordination of behaviours and adherence to collective actions [31].

From this perspective, symbolic congruence could be interpreted as a regulatory mechanism of collective cognition. By aligning different forms of legitimacy – institutional, customary, historical, religious, constitutional, or technical – certain socially recognized figures contribute to reducing collective cognitive dissonances and to strengthening the coherence of shared representations of risk and of the responses to be implemented.

This collective cognitive coherence then fosters the emergence of a climate of trust conducive to the acceptability of health measures [32], to cooperation between the different actors, and to community engagement. It thus contributes indirectly to improving the operational effectiveness of response

arrangements and to strengthening societal resilience.

The concept of symbolic congruence could henceforth be integrated into a more general model articulating legitimacy, collective cognition, and resilience. In this model, symbolic congruence would act as an intermediate mechanism enabling multiple sources of legitimacy to be transformed into coherent collective representations, which would in turn influence the individual and collective behaviours necessary for crisis management.

Such an approach opens up interdisciplinary research perspectives combining disaster medicine, cognitive psychology, anthropology, the sociology of organisations, and the governance sciences.

CONCLUSION

Disasters do not only damage infrastructures, institutions, and health systems; they also damage trust, often first, rapidly, and intensely. This is a decisive issue for disaster medicine, because scientific recommendations, however accurate, may become operationally ineffective when populations no longer trust the institutions or actors who formulate them. In this sense, science without trust is not enough to secure adherence, cooperation, or resilience.

Symbolic congruence offers a practical framework for addressing this vulnerability. The four case studies suggest that resilience depends not only on plans, protocols, and resources, but also on the convergence of recognized legitimacy, visible action, and socially credible impact. Trusted symbolic, customary, religious, constitutional, or community figures can help translate scientific measures into a language of confidence, continuity, and local intelligibility.

For practitioners, the operational implication is direct: disaster-medicine teams should identify, respect, and involve trusted local figures – including customary leaders, religious authorities, community mediators, and, where relevant, local “kings” and “queens” – before and during crises. Their support should be considered a preparedness resource, not an accessory symbolic gesture. Future research should develop indicators of trust, acceptability, community engagement, and response effectiveness, and should test whether early involvement of legitimate local figures improves adherence to protective behaviours in epidemic, climatic, and humanitarian crises.

KEYWORDS

DISASTERS; TRUST; RESILIENCE, PSYCHOLOGICAL; LEADERSHIP; COMMUNITY PARTICIPATION; ANTHROPOLOGY, CULTURAL

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SUPPLEMENTARY INFORMATION

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The Authors declare that there is no conflict of interest.

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