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Food Neophobia in Gastronomic Encounters with Novel Natural Foods: Mechanisms and Strategies

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ABSTRACT: Edible insects, marine algae, animal by-products, and alternative protein sources offer considerable nutritional and sustainability potential, yet their unfamiliarity can create strong food-neophobia responses and restrict consumer acceptance. This study therefore aimed to identify the main mechanisms associated with food neophobia toward novel natural food resources and to examine how existing product and presentation strategies address these mechanisms. Qualitative content analysis and thematic synthesis were applied to 154 records published between 1980 and 2025. Familiarity and categorization emerged as the most frequently reported mechanism (62.3%), followed by sensory threat and exposure or learned safety (34.4% each), disgust (33.8%), social norms (31.8%), perceived risk (29.8%), and information uncertainty (29.8%). Application studies focused mainly on naming and framing (57.1%), familiarization (52.4%), and explanation (47.6%). The descriptive comparison showed that information and trust received relatively greater attention in applications, whereas disgust and learned safety were addressed less frequently. Overall, the findings suggest that acceptance strategies are likely to be more effective when they respond to the mechanism driving avoidance rather than relying on a single communication or presentation technique.

1. INTRODUCTION

The nutrition and sustainability agenda requires new natural resources to enter the food system. Edible insects offer high protein and micronutrient density, marine algae are a source of fibre and bioactive compounds, offal and animal by-products allow losses in carcass utilisation to be recovered, and plant-based and cell-based alternatives aim to reduce pressure on animal protein. The technological processability of these resources has largely been solved. Their acceptability remains an open problem.

Food neophobia sits at the centre of the acceptance problem. The concept is defined as reluctance to taste new or unknown foods and rests on a measurement tradition of more than thirty years [43,46]. The literature consistently reports that neophobia limits the acceptance of edible insect products [64], algae-based foods [31], offal [2,55] and alternative protein formats [38].

For product development, this body of work has produced a broad repertoire of recommendations. Presenting the product in a processed form with reduced visibility, placing it in a familiar carrier, explaining ingredient and origin information, choosing the product name carefully and offering a small tasting opportunity are frequently proposed strategies [26,59,63]. These recommendations are intuitively persuasive and recur across the application literature.

One question remains unanswered. Food-neophobia mechanisms have been examined across heterogeneous populations and food contexts, including children, general consumers, vegetables, ethnic foods, and emerging natural resources. This breadth provides a mechanism base for analytical transfer, while applicability to a particular natural resource varies by product and setting. Difficulty in recognition, expectation of illness, disgust, sensory threat, information uncertainty, social disapproval, and limited learning form distinct pathways that may respond differently to an intervention. The relative emphasis of these pathways in the broad mechanism corpus may differ from their targeting in product, labelling, tasting, and presentation practices. Mapping that descriptive divergence can reveal where application efforts concentrate and where transferable mechanism evidence receives less attention.

The study addresses this gap through two research questions:

RQ1. Through which psychological and social mechanisms is food neophobia produced or strengthened, and how direct is the evidence base for these mechanisms?

RQ2. Which mechanisms are targeted in the application subset, and how can these practices inform analytical transfer to the acceptance of novel natural food resources?

The contribution operates at two levels. First, the study maps heterogeneous food-neophobia evidence under seven pathways and classifies the evidential relation of each record to the mechanism. Second, it compares relative emphasis in this broad mechanism corpus with targeting patterns in the 21-record application subset. This descriptive alignment analysis identifies pathways that appear less frequently in current product and presentation practices and clarifies the conditions under which broader mechanism evidence may inform the acceptance of novel natural resources.

2. MATERIALS AND METHODS

2.1 Analytical design

The study used a Semantic Scholar-based structured evidence-mapping design and analysed the assembled corpus through qualitative content analysis and thematic synthesis. The corpus brings together experimental, observational, measurement, intervention, and conceptual studies, with outcomes ranging from intention to actual intake. Its methodological and outcome heterogeneity precluded a defensible pooled effect-size estimate. The analysis therefore combined study-level thematic coding, frequency mapping, and classification of each record's evidential relation to the coded mechanism. Frequencies were interpreted as reporting density within the assembled corpus.

2.2 Search and corpus formation

The search was completed in Semantic Scholar on 9 June 2026 under the research objective 'Food neophobia mechanisms and gastronomy'. Retrieval used a natural-language research objective supported by iterative academic literature discovery. The aim was to map food neophobia across populations, food types, mechanisms, gastronomic applications, and tourism-related encounters. Six conceptual blocks guided retrieval: phenomenon; acceptance and behaviour; mechanism; gastronomy and foodservice; tourism and cross-cultural encounter; and intervention and management. For transparent reapplication, these blocks were retrospectively formalised as four parallel query families because a single expression requiring all blocks would narrow coverage of general mechanism and child-focused studies. Result sets were merged at study level.

Query family A: General phenomenon and acceptance: ("food neophobia" OR "food neophilia" OR "novel food" OR "unfamiliar food" OR "food rejection" OR "food aversion") AND (acceptance OR rejection OR willingness OR tasting OR consumption OR "food choice" OR "menu choice" OR "purchase intention").

Query family B: Mechanisms: ("food neophobia" OR "novel food" OR "unfamiliar food") AND (familiarity OR categorization OR schema OR disgust OR contamination OR "risk perception" OR "food safety" OR arousal OR anxiety OR sensory OR "social modeling" OR "social norm" OR exposure OR "learned safety").

Query family C: Gastronomy and professional management: ("food neophobia" OR "novel food" OR "unfamiliar food" OR "food acceptance") AND (restaurant OR gastronomy OR chef OR menu OR hospitality OR foodservice OR dining OR tasting OR service OR culinary) AND (intervention OR familiarization OR framing OR transparency OR exposure OR "sensory education" OR storytelling OR communication OR design).

Query family D: Tourism and local food: ("food neophobia" OR "food neophilia" OR "novel food" OR "unfamiliar food") AND (tourist OR tourism OR "local food" OR "ethnic food" OR destination OR "culinary tourism" OR "foreign food" OR cross-cultural).

Initial retrieval was expanded through targeted searches for foundational measurement and taxonomy studies, mechanism syntheses, exposure and intervention studies, gastronomy, restaurant, and menu applications, tourism and local-food studies, and relevant cited and citing records. Each added record was checked for topical fit and human-sample relevance before inclusion.

For empirical records, the inclusion criteria were direct relevance to food neophobia, neophilia, acceptance of new or unfamiliar food, food rejection, disgust, familiarity, risk, or exposure; use of human participants; and provision of a codable finding. Prior evidence syntheses and conceptual models were retained when they provided a codable taxonomy, model, or mechanism account. Exclusion grounds were topic mismatch, a non-food novelty context, an unrelated outcome, a non-human empirical sample, insufficient reporting, commentary without analytical contribution, a duplicate report, or lack of full-text access. Measurement studies were retained and distinguished through the evidential-relation categories.

The search produced 154 unique records published between 1980 and 2025. No confirmed duplicate reports were identified. The total denotes the deduplicated study-level corpus. Initial platform-result volume was unavailable. Full text was obtained for 151 records, and coding was carried out on this set. Three records without full-text access were retained in the bibliographic corpus and excluded from frequency calculations [21,39,42].

Within the corpus, 21 records that reported or explicitly proposed a specific product, formulation, naming, labelling, tasting, or presentation practice formed the application subset. The subset retained empirically assessed practices and analytically transferred recommendations, which were distinguished during interpretation and carried different evidential status. The record-level cite-key list, result ordering, coding matrices, and evidence ledger were retained in the study workspace.

2.3 Coding framework

Coding was carried out at study level and allowed multiple assignment. Because a record can carry more than one mechanism, the sum of the frequencies exceeds the corpus size.

Mechanism codes (M1 to M7). M1 familiarity, categorization and food schema; M2 perceived risk, illness and food safety uncertainty; M3 disgust, contamination and inappropriateness; M4 sensory threat and high arousal; M5 information uncertainty, trust and meaning-making; M6 social norm, modelling and cultural appropriateness; M7 exposure, learned safety and feedback. Each higher-order code was operationalised through four sub-codes.

Individual trait variables (scale score, sensitivity, sensation seeking) and decision architecture chains (attitude, perceived value and satisfaction models) were kept separate and were excluded from the mechanism frequencies. This separation prevents a scale score from being treated as process evidence.

Evidential relation to the mechanism (K1 to K3). K1 covers records in which a mechanism is measured, manipulated, or tested through behavioural comparison. K2 covers records in which a mechanism is examined within a mediation, moderation, or structural model. K3 covers prior evidence syntheses, conceptual models, and analytical transfer. The categories may co-occur because a record can support a mechanism in more than one way. They describe the relation between a record and a coded mechanism and carry no ranking of study quality.

Application codes. Concrete actions were grouped under eight codes: explanation and education (A1), building trust and transparency (A2), sensory product development (A3), pairing and familiarization (A4), naming and framing (A5), tasting and experience arrangement (A6), repeated exposure (A7), monitoring and adaptation (A8). Higher-order functions were derived from these actions: trust and meaning-making (F1 = A1 to A2), sensory mediation and product design (F2 = A3), familiarization and framing (F3 = A4 to A5), first contact and repetition (F4 = A6 to A7), feedback and adaptation (F5 = A8). Within the application subset, the mechanism targeted or transferred by each record was also coded.

The main rules governing coding decisions were as follows: a scale score on its own is a trait code; a single tasting does not become an exposure code and requires evidence of a subsequent decision or of generalisation; in package interventions the outcome is not attributed to a single action or mechanism; intention, hypothetical choice, observed choice and actual intake are recorded as separate outcome levels; direction codes are counted at the evidence-unit level, so one record can contribute more than one assignment across mechanisms, conditions, or outcomes; sales data are reported as a proxy for consumption.

2.4 Verification and coding consistency

All frequencies were verified through a row-level recount. During the recount, two prior synthesis records marked with ambiguous notation were converted into explicit higher-order codes, codes that could not be traced at row level were removed from the frequencies, and one candidate sub-code was excluded. Evidential-relation and direction frequencies were calculated only for the 138 records carrying at least one mechanism code.

The primary coder then completed a second record-by-record examination of the coding matrix. A second academic independently audited the record assignments, code definitions, and frequency totals. This external examination identified no discrepant coding decision or count requiring reconciliation. The procedure served as a consistency audit of the final coding matrix.

The guiding reporting principle is that code frequency indicates the density with which a mechanism is reported in the assembled corpus and requires separate evidence for any claim of causal primacy. Application findings distinguish empirically assessed practices from author recommendations and analytical transfer.

3. RESULTS AND DISCUSSION

3.1 Mechanism map (RQ1)

Table 1 gives the distribution of the seven mechanism pathways in the corpus. Of the 151 coded records, 138 carry at least one mechanism code; the remaining 13 records stay at the level of trait measurement or decision architecture.

Table 1. Prevalence of mechanism pathways in the corpus (n = 151)

Mechanism	Records	Share	Meaning in the context of novel natural resources
M1 Familiarity, categorization and food schema	94	62.3%	Inability to resolve which food category the product belongs to, how it is eaten and what taste profile it carries
M4 Sensory threat and high arousal	52	34.4%	Odour, texture, pungency and intensity turning into negative arousal
M7 Exposure, learned safety and feedback	52	34.4%	Repeated encounters without negative consequences increasing acceptance
M3 Disgust, contamination and inappropriateness	51	33.8%	The product being classified as dirty, contaminated, animal-derived or culturally inedible
M6 Social norm, modelling and cultural appropriateness	48	31.8%	Others' consumption behaviour and normative approval regulating approach
M2 Perceived risk, illness and food safety	45	29.8%	Expectation of pathogens, allergens, poor hygiene and physical harm
M5 Information uncertainty, trust and meaning-making	45	29.8%	Uncertainty in ingredient, processing method, source and label information

Note. Because a record can carry more than one mechanism, the shares sum to more than one hundred.

The familiarity pathway is the most prevalent mechanism by a clear margin. This prevalence indicates that recognition problems receive the greatest reporting emphasis in the assembled corpus. New products may be difficult to classify or link to a familiar schema, and their expected liking may remain low [8,12,48]. The drop in categorization performance and the more conservative decision criterion observed at high neophobia levels support the cognitive basis of this pathway [13]. Pairing the product with a familiar flavour principle or sauce increases willingness to try, which gives the pathway its product-level counterpart [62].

The sensory threat and learned safety pathways are level at 52 records each. The sensory threat pathway rests on findings that novelty and intensity raise arousal and that raised arousal lowers liking [23,45]. Neophobic individuals respond to irritant chemosensory sensations more intensely and read them as more threatening, which links this pathway directly to sensory profile design [28,44]. The learned safety pathway rests on intervention evidence showing that repeated exposure increases acceptance and that the effect can generalise to similar products [3,20,30,54].

Keeping the disgust and sensory threat pathways separate matters analytically. Disgust is an evaluation of the product's origin, bodily associations and cultural classification [34,51]. Sensory threat is a response to the product's physical properties. The two pathways come apart in findings where sensory liking rises after tasting while willingness to eat the product regularly stays low [17,58]. Sensory product design can therefore reduce sensory threat while leaving the disgust pathway in place.

A similar distinction holds between the risk and information pathways. The risk pathway covers the judgement that the product may cause physical harm, while the information pathway covers understanding of the ingredients, the processing method and the source. The effect of providing information is conditional. Taste information and comparison with a familiar flavour have been shown to increase willingness to try [33,41]. Extensive information sessions, on the other hand, have been reported to produce a reverse effect through expectation mismatch and disgust [1], label explanations have been shown to lower intake and slow product handling [37], and a comprehensive educational text has produced weaker results than a short explanation presented in a familiar format [15].

The social norm pathway shows that the social setting does more than provide background. Watching a neophilic model select and taste the product increases new food choice [22], a social norm message raises cricket liking and actual intake [16], and tasting in a group setting produces higher participation than individual tasting [25].

3.2 Evidential relation to the mechanism

Among the 138 mechanism-coded records, 77 (55.8%) provide direct mechanism evidence, 50 (36.2%) provide model-based evidence through structural, mediation, or moderation analysis, and 33 (23.9%) provide conceptual or transferred evidence. Because the categories may co-occur, the same record can carry more than one category.

The presence of direct mechanism evidence in 77 records shows that more than half of the mechanism-coded records measures, manipulates, or behaviourally compares at least one mechanism. This proportion describes evidential relation and carries no study-quality ranking. Two qualifications remain important. A substantial share of the records carrying direct evidence use package interventions in which information, sensory education, social modelling, and repeated exposure are applied together, leaving component-specific effects unresolved [9,49]. Most model-based evidence is cross-sectional and provides limited support for temporal ordering [14,56].

Direction codes were counted at the evidence-unit level. Accordingly, the 138 unique mechanism-coded records generated 157 direction assignments across different mechanisms, conditions, or outcomes. The value 157 represents the total number of direction labels, while the number of unique records remains 138. Of these assignments, 55 indicate increased avoidance, 48 indicate increased approach, 47 indicate variation by product or person, and 7 indicate that direction was not tested directly. Nineteen records carry more than one direction category. The frequency of conditional assignments underscores the sensitivity of the mechanisms to product category and consumer profile.

3.3. The application repertoire at product and presentation level (RQ2)

Table 2 gives the distribution of actions and functions across the 21 records reporting or explicitly proposing a concrete practice.

Table 2. Distribution of concrete actions and higher-order functions (n = 21)

Code	Action	Records	Share	Higher-order function	Records	Share
A5	Naming and framing	12	57.1%	F3 Familiarization and framing	14	66.7%
A4	Pairing and familiarization	11	52.4%			
A1	Explanation and education	10	47.6%	F1 Trust and meaning-making	11	52.4%
A2	Building trust and transparency	6	28.6%			
A6	Tasting and experience arrangement	8	38.1%	F4 First contact and repetition	8	38.1%
A7	Repeated exposure	1	4.8%			

Code	Action	Records	Share	Higher-order function	Records	Share
A3	Sensory product development	5	23.8%	F2 Sensory mediation and product design	5	23.8%
A8	Monitoring and adaptation	1	4.8%	F5 Feedback and adaptation	1	4.8%

Note. Because action and function codes may co-occur within a record carry more than one mechanism, the shares sum to more than one hundred.

The centre of gravity of the repertoire is the symbolic and communicative work carried out before consumption. Naming, familiarization and explanation appear in about half of the records or more. These actions take the following concrete forms: presenting an insect ingredient in a familiar flour or patty format [59], having a chef prepare algae products and pair them with known dishes [31], placing a soup on the menu under a familiar name with a recommendation label [4], describing the dishes of a foreign cuisine by likening them to local equivalents [18], and presenting visual and verbal information together [24].

The sensory product development function appears in five records, three of which examine professional practice directly. Chefs redesigning a new ingredient by combining traditional and innovative formats [6], student chefs assessing insect flour for texture, odour, and taste and developing product ideas from it [10], traditional taste, colour, and form references used as carriers in new product design [5], and recipes developed with professional chef support raising palatability [7] are concrete examples of this function. The contrast between low frequency and direct professional examination reinforces the interpretation of frequency as reporting density. Frequency carries no indicator of importance or quality.

Two actions that address the period after consumption are almost absent from the corpus. Repeated exposure appears in a single record, a seven-month school cafeteria programme [7]. Monitoring and adaptation also appear in a single record, where the function remains at the level of a managerial recommendation [53].

Outcome codes can co-occur within a record. Willingness-to-try or purchase-intention outcomes (O2) appear in 10 records (47.6%), observed or hypothetical choice (O3) in 6 (28.6%), and attitude or acceptance (O1) in 5 (23.8%). Actual intake (O4) appears in 1 record (4.8%), satisfaction or post-consumption outcomes (O5) in 3 (14.3%), and professional adoption or design capacity (O6) in 3 (14.3%). The school programme is the only record measuring actual intake [7]. In the field study reporting real sales data, sales should be read as a proxy for consumption [4].

3.4 Descriptive alignment between mechanism reporting and application targeting

Table 3 presents the reporting density of each mechanism in the full-text corpus alongside its targeting rate in the application subset.

Table 3. Descriptive comparison of mechanism reporting and application targeting

Mechanism	Mechanism reporting (n = 151)	Application targeting (n = 21)	Pattern
M1 Familiarity and categorization	94 (62.3%)	14 (66.7%)	Similar relative emphasis
M5 Information uncertainty and trust	45 (29.8%)	13 (61.9%)	Denser targeting
M4 Sensory threat and arousal	52 (34.4%)	9 (42.9%)	Similar relative emphasis
M6 Social norm and cultural appropriateness	48 (31.8%)	8 (38.1%)	Similar relative emphasis
M2 Perceived risk and food safety	45 (29.8%)	6 (28.6%)	Similar relative emphasis

Mechanism	Mechanism reporting (n = 151)	Application targeting (n = 21)	Pattern
M7 Exposure and learned safety	52 (34.4%)	3 (14.3%)	Less frequent targeting
M3 Disgust and contamination	51 (33.8%)	2 (9.5%)	Less frequent targeting

Note: These values describe two stages of the evidence architecture and should be interpreted as a descriptive juxtaposition rather than a gap estimate.

The two rates represent different constructs and denominators. The first indicates mechanism-reporting density within 151 records, while the second indicates targeting or analytical transfer within 21 application records. Their percentage-point difference is therefore a descriptive contrast in relative emphasis, and each additional application record changes the targeting rate by 4.8 percentage points. The comparison carries no estimate of relative effect size or population prevalence.

Relative emphasis is similar across familiarity, sensory threat, social norm, and risk, where absolute differences stay below ten percentage points. The information and trust pathway has a 32.1-point higher targeting rate. Naming, label text, and origin explanation account for much of this concentration.

Disgust and learned safety show the largest negative descriptive differences. Both appear in more than one-third of the mechanism corpus. In the application subset, disgust is targeted in two records and learned safety in three. Within the assembled corpus, these pathways are frequently reported at the mechanism level and less often targeted by product and presentation practices. The small application denominator requires cautious interpretation.

The cross-distribution at function level gives more detail on the same pattern (Table 4).

Table 4. Cross-distribution of targeted mechanism and application function (record counts, n = 21)

	F1 Trust and meaning-making	F2 Sensory product design	F3 Familiarization and framing	F4 First contact and repetition	F5 Feedback
M1 Familiarity	8	4	14	5	1
M2 Risk	5	0	3	1	1
M3 Disgust	2	1	2	1	0
M4 Sensory threat	5	5	5	5	0
M5 Information and trust	10	4	10	3	0
M6 Social norm	3	3	6	4	0
M7 Exposure and learned safety	0	1	2	3	0

The matrix concentrates at the intersection of the familiarity and information rows with the familiarization and trust columns. The disgust row remains sparse across all functions, with a maximum cell count of two records. In the learned safety row, trust and meaning-making has a zero count, while the three records targeting this pathway concentrate in first contact and repetition. These counts describe the distribution within the 21-record subset.

4. DISCUSSION

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4.1. Resistance of the disgust pathway to information

Explanation, naming and familiarization sit at the centre of the application repertoire. These tools reduce uncertainty about what the product is and how it should be understood, which is why they work on the familiarity and information pathways.

The disgust pathway follows a distinct logic. Disgust is an ideational evaluation of a product's origin and bodily associations [11,52]. Additional product information can strengthen this evaluation under some combinations of product form, message content, and consumer response because origin and ingredient associations become more salient. Extensive label explanation lowered intake of insect-containing products and slowed product handling in one study [37], while detailed information sessions were associated with less favourable attitudes through expectation mismatch in another setting [1].

For product development, the evidence suggests that resources carrying a high disgust risk may benefit more from social-norm cues and formulation changes that reduce salient origin or bodily associations than from denser label information. A social-norm message increased cricket liking and actual intake in one experiment [16], and group tasting produced higher participation in another setting [25]. On the formulation side, processed forms with reduced ingredient visibility received higher acceptance than visible forms across several product contexts [26,47,59].

4.2. The learned safety pathway and the single-encounter problem

The comparatively low targeting of learned safety partly reflects the design of acceptance studies. Exposure evidence includes eight to ten or more repeated encounters and indicates that acceptance gains can generalise to similar products [20,54,61]. Most records in the application subset use a single-session tasting or single-choice design.

This design difference matters when evaluating novel natural resources. A single sensory test estimates initial acceptance, whereas a multi-session design can capture changes that build through repeated encounters. Consumers with prior insect experience report markedly higher willingness to eat than inexperienced consumers, suggesting that acceptance varies with experience [60]. Multi-session product testing would make this exposure-related change measurable.

4.3. The conditionality of investment in information

The higher targeting density of the information and trust pathway is plausible because labelling offers producers a relatively low-cost intervention. Its effects remain conditional. Taste information and comparison with a familiar flavour increase willingness to try in several studies [33,41,57]. Nutritional-value messages show weaker effects and can provoke an adverse response under some conditions [36]. Variation by neophobia level, message density, and product format further supports this conditional interpretation [50].

Label and communication design should therefore be differentiated by product category. Where sensory threat and familiarity dominate, information about expected taste takes priority. Where disgust dominates, additional information density may yield modest gains or adverse reactions depending on product form, message content, and consumer profile.

4.4. Testable propositions

Table 5. Propositions derived from the synthesis

No	Proposition	Evidence base
P1	Placing a novel natural ingredient in a familiar carrier product or flavour principle is expected to reduce familiarity-driven rejection and increase willingness to try.	[59,62,63]
P2	Information about the expected taste is expected to increase willingness to try more strongly than information about nutritional value.	[33,36,41]
P3	Adjusting sensory intensity at the formulation level is expected to reduce rejection driven by sensory threat.	[10,23,28]

No	Proposition	Evidence base
P4	When disgust is the dominant pathway, additional label detail is expected to yield smaller acceptance gains than processed presentation and social-norm cues, with effects contingent on product form and message content.	[16,17,26,37]
P5	Group-based tasting and social-norm cues are expected to increase participation and intake-related outcomes relative to individual tasting, subject to product and setting.	[16,22,25]
P6	Multi-session sensory testing is expected to capture changes in acceptance across repeated exposure more fully than a single-session test.	[20,54,60]

4.5. Limitations

Six limitations frame the interpretation. First, the application subset consists of 21 records, and each record changes its percentage distribution by 4.8 points. Second, the comparison between mechanism reporting and application targeting rests on different denominators and indicates relative emphasis, with no estimate of comparative effect size. Third, a substantial share of records carrying direct evidence use package interventions, leaving component-specific effects unresolved. Fourth, three records lacked accessible full text and were excluded from frequency calculations. Fifth, the Semantic Scholar-based structured evidence map reflects the platform's coverage, indexing, and ranking characteristics. Retrieval combined a natural-language objective with iterative expansion, while raw platform-result counts and exact search-history logs were unavailable; the findings are therefore corpus-bounded. Sixth, the mechanism corpus spans heterogeneous populations and food contexts. Analytical transfer to edible insects, algae, offal, and alternative proteins requires product- and context-specific testing.

4. CONCLUSION

The study mapped a heterogeneous food-neophobia corpus under seven mechanism pathways and examined how these pathways were targeted or analytically transferred in practices intended to increase acceptance of novel natural food resources. Three results stand out.

First, familiarity and categorization receive the greatest reporting emphasis in the assembled corpus. This pathway appears in 62.3% of the full-text corpus and forms the most widely distributed mechanism pathway in the literature.

Second, a descriptive divergence appears between mechanism reporting and application targeting. Information and trust have a 32.1-point higher targeting rate in the application subset, while disgust and learned safety have targeting rates roughly twenty percentage points below their reporting density in the full-text corpus. These differences indicate relative emphasis across two denominators.

Third, the thematic synthesis suggests two plausible explanations for this divergence. Where disgust dominates, information-based tools may yield limited or adverse effects under some product and message conditions. Learned safety develops through repeated encounters, while most application records use single-session designs.

For product development, the implications are conditional. In edible insect, algae, offal, and alternative protein products, the return on label and communication design depends on the mechanism profile of the product category. Where disgust dominates, formulation that reduces salient origin associations and presentation using social-norm cues warrant experimental testing. Multi-session acceptance designs can capture exposure-related change across encounters. The synthesis offers six propositions and a research agenda for experimental validation; it carries the status of a corpus-bounded analytical framework.

Declaration of Generative AI

During the preparation of this manuscript, the author used ChatGPT (OpenAI) to support Turkish-to-English translation, language editing, and improvements in grammatical clarity and readability. The author subsequently reviewed and revised the

AI-assisted output. All scientific arguments, methodological decisions, data analyses, interpretations, citations, and conclusions were verified and approved by the authors, who assume full responsibility for the published content.

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