

Does Language Shape Our Conceptual Frameworks of Love?

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ABSTRACT

This paper investigates whether the language a person speaks shapes how they conceptualize love, testing predictions from the linguistic relativity tradition against the biological universalism account associated with Helen Fisher's cross-cultural research on romantic attachment. Seventy-eight participants across seventeen first-language backgrounds completed a ninety-one-item Likert survey probing love's necessary conditions, its relationship to other kinds of love, its moral and social weight, and its status as a biological or cultural phenomenon.

The results suggest a distinction between a stable, cross-linguistic phenomenological core of love, its affective force, its identity-shaping quality, its grounding in freedom, and a more variable conceptual architecture surrounding that core, covering what love obligates, how it ranks against other loves, and whether it is understood primarily as a feeling or as a decision. Descriptive differences in this architecture were broadly consistent with predictions drawn from specific linguistic features, such as the grammatical encoding of familial obligation in Arabic and Hindi/Urdu and the passionate/companionate lexical distinction in Turkish. Because the design is exploratory, group sizes are uneven, and no formal statistical testing was conducted, these patterns are best read as hypothesis-generating rather than confirmatory. The paper argues that biological universalism and linguistic relativity are best understood as accounts of different levels of the same phenomenon rather than as competing explanations.

INTRODUCTION

The words available to us for love, family, obligation, and longing are not neutral containers but structures that organize what we notice, what we assume, and what we take to need explanation at all. Arabic distinguishes between *hubb*, a deep and abiding love, and *ishq*, a consuming passionate desire, two experiences that English collapses into a single word. Sanskrit enumerates dozens of love-adjacent states, each with its own phenomenological texture. Mandarin embeds relational hierarchy so deeply into its kinship terminology that the language itself encodes who you are in relation to others before you've said anything about how you feel. These are not merely poetic differences. They are structural ones, and the question this paper takes seriously is whether they matter: whether speakers of different languages don't

just express love differently but actually think about it differently, at the level of what love requires, what it permits, and what it obligates.

This is, at its core, a question about the Sapir-Whorf hypothesis, the claim, in its weak form, that language influences conceptual organization without fully determining it.¹ Running alongside the linguistic relativity tradition is a body of research suggesting that love, whatever its cultural expression, is grounded in a universal neurological substrate. Dopamine, oxytocin, the attachment systems that evolved long before any particular language did, these suggest that at some level love is the same everywhere, and that the differences are surface rather than deep. The survey at the center of this paper was designed to find out where, exactly, that surface ends.

Seventy-eight participants across seventeen first-language backgrounds answered ninety-one Likert-scale items probing their conceptualizations of love: its necessary conditions, its relationship to other forms of love, its moral and social weight, and its status as biological or cultural phenomenon. What the data returned was not a clean answer but something more interesting: a conceptual core that held remarkably steady across languages, sitting alongside patterned differences on precisely the questions where linguistic structure would predict them. Those differences are reported here descriptively; as detailed in Section III.D, no inferential statistical tests were conducted, and the reported comparisons should be read as suggestive rather than confirmed.

The results indicate that both traditions are partly right, and that the boundary between them is meaningful. The experience of love, its affective texture, its identity-shaping force, its irreducibility to choice, appears to be biologically grounded and cross-culturally stable. The conceptual architecture surrounding that experience, what love obligates, how it ranks against other loves, whether it is primarily a feeling or a commitment, is where language does its work. That distinction is what the data, imperfectly but suggestively, supports.

THEORETICAL FRAMEWORK

A. The Sapir-Whorf Spectrum

The hypothesis that language shapes thought has a long and contested history. In its strong form, sometimes called linguistic determinism, the claim is that the language you speak determines the thoughts you can have, that cognition is fully constrained by linguistic structure. This version has been largely discredited. Speakers of languages without a word for a concept can still think about it; prelinguistic infants demonstrate conceptual organization that precedes language acquisition; the same individual can hold concepts that their native language doesn't encode after exposure to another language that does.²

¹Benjamin Lee Whorf, *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf*, ed. John B. Carroll (Cambridge: MIT Press, 1956).

²Elizabeth S. Spelke, "Core Knowledge," *American Psychologist* 55, no. 11 (2000).

The weak version is more defensible and more interesting. It holds that the categories your language makes available, the distinctions it grammatically encodes, the scripts it culturally associates with certain words, all exert a subtle but real pressure on how you organize experience.³ This is the version Lera Boroditsky's work has done most to empirically support. Her studies on color perception demonstrated that speakers of languages with more color terms show faster discrimination between colors near those term boundaries, suggesting that lexical categories sharpen perceptual ones.⁴ Her work on spatial cognition showed that speakers of languages using absolute spatial frames (north, south, east, west) rather than relative ones (left, right) demonstrate systematically different spatial reasoning even in tasks that have nothing to do with language.⁵ The effects are real, measurable, and tied specifically to linguistic structure.

Love presents a harder and more interesting case than color or space. It is not perceptual; you cannot point at love the way you can point at blue. It is evaluative and relational, embedded in social structures, moral frameworks, and personal histories in ways that perceptual experience is not. If linguistic relativity operates in the domain of love, it is likely operating at this evaluative and relational level, shaping not what love feels like but what it means, what it demands, and how it organizes a life.

B. The Biological Universalism Counter

The strongest challenge to a linguistic relativity account of love comes from the biological universalism tradition, most associated with Helen Fisher's cross-cultural research on love and attachment. Fisher's argument, grounded in neuroimaging and anthropological survey data, is that romantic love is a universal human experience with a consistent neurological profile: elevated dopamine and norepinephrine, suppressed serotonin, activation of reward circuitry associated with motivation and goal-pursuit rather than pleasure per se. This profile appears across cultures with remarkable consistency, suggesting that whatever linguistic and cultural variation exists in how love is talked about and organized socially, the underlying experience is species-wide.⁶

This view is not easily dismissed. The cross-cultural presence of something recognizable as romantic love, even in societies that actively discourage it, suggests a biological substrate that cultural and linguistic variation sits on top of rather than fully constitutes. Berscheid and Walster's distinction between passionate and companionate love maps onto patterns found across radically different cultural contexts.⁷ Sternberg's triangular theory, love as a combination of intimacy, passion, and commitment in varying

³John A. Lucy, *Language Diversity and Thought: A Reformulation of the Linguistic Relativity Hypothesis* (Cambridge: Cambridge University Press, 1992).

⁴Jonathan Winawer et al., "Russian Blues Reveal Effects of Language on Color Discrimination," *Proceedings of the National Academy of Sciences* 104, no. 19 (2007): 7780–7785.

⁵Lera Boroditsky, "Does Language Shape Thought? Mandarin and English Speakers' Conceptions of Time," *Cognitive Psychology* 43, no. 1 (2001).

⁶Helen Fisher, Arthur Aron, and Lucy L. Brown, "Romantic Love: An fMRI Study of a Neural Mechanism for Mate Choice," *Journal of Comparative Neurology* 493, no. 1 (2005).

⁷Ellen Berscheid and Elaine Walster, *Interpersonal Attraction*, 2nd ed. (Reading: Addison-Wesley, 1978).

proportions, has shown reasonable cross-cultural applicability, though its relative weighting varies in ways that are themselves culturally patterned.⁸

Where the biological universalism account falls short is at the level of conceptuality. Knowing that the neurological experience of love is universal tells you relatively little about how that experience gets organized into obligations, ranked against competing loves, or defined as requiring sacrifice or exclusivity or commitment. These are the questions that vary across the dataset in this paper, and they are the questions where language is most plausibly doing work that biology alone cannot explain.

C. Synthesis

The position this paper takes is that both traditions are capturing something real, talking about different levels of the same phenomenon. The feelings are biological; the categories are linguistic. The raw experience of love, its affective force and its identity-shaping quality, appears to be grounded in a universal neurological and evolutionary substrate. The conceptual architecture that grows up around that experience, what love requires, what it permits, how it ranks against other moral claims, whether it is primarily a feeling or a decision or an obligation, is where linguistic and cultural variation does its work.

This distinction maps onto a methodological one. Survey items that ask about the phenomenology of love, whether it changes who you are, whether it involves caring for the other person, are tapping the biological layer. Items that ask about love's obligations, its ranking against other loves, its relationship to sacrifice and family priority are tapping the conceptual architecture layer. If the synthesis is right, we would expect convergence on the first type and descriptive differences on the second. That is, broadly, what the data shows.

This is consistent with a weak rather than strong linguistic relativity claim. Language is shaping how experience gets conceptually organized, what it gets connected to, what it is taken to imply. The speaker of a language that grammatically encodes familial obligation in ways English does not is not necessarily having a different feeling. They may be having the same feeling and finding it connected, by their language's conceptual architecture, to a different set of moral and relational implications.

D. Linguistic Features Predicted to Drive Differences

Before examining the results, it is worth making explicit what linguistic features, across the major language groups in the dataset, one would predict to drive cross-group differences, and on which items.

Arabic distinguishes lexically between *hubb* (deep, abiding love, applicable to family, God, and romantic partners) and *ishq* (passionate, consuming desire, more exclusively romantic). This distinction, combined with the grammatical encoding of familial obligation in Arabic's kinship terminology, would predict higher scores on family priority items, higher scores on sacrifice and obligation items, and potentially a

⁸Robert J. Sternberg, "A Triangular Theory of Love," *Psychological Review* 93, no. 2 (1986).

different pattern on the feeling vs. decision dimension, with love felt as natural obligation rather than chosen commitment.⁹

Mandarin does not grammatically distinguish types of love in the way Arabic does, but its kinship terminology is highly specific, encoding generational and gender distinctions that English collapses. The cultural-linguistic script around filial piety (xiào) is deeply embedded in how family relationships are linguistically framed. This would predict higher family priority scores and potentially higher scores on obligation items, though the effect may be less pronounced than in Arabic given the absence of a lexical love-type distinction.¹⁰

Hindi distinguishes between prem (deep, often spiritual or familial love) and pyaar (more colloquial, romantic love), with prem carrying connotations of devotion and selflessness that pyaar does not. Combined with strong filial piety encoding, this would predict patterns similar to Arabic on obligation and family priority items.¹¹

Romance languages share a relatively unified amor but diverge in cultural-linguistic scripts. French has a strong cultural-linguistic association between love and autonomy, individual expression, and constructed rather than natural feeling, which would predict higher scores on the social construction items and potentially the decision/commitment framing. Spanish and Portuguese share more of a passion-centered script, and Portuguese specifically has the cultural-linguistic concept of saudade, a longing for what is absent, which may shape responses on love's persistence and identity-shaping dimensions.¹²

Turkish distinguishes between aşk (passionate, consuming love) and sevgi (warm, affectionate love applicable to family and friends). This distinction is roughly analogous to the Arabic hubb/ishq split, and would predict lower scores on sexual attraction as necessary for love, since sevgi doesn't require it, and potentially a more diffuse understanding of what counts as love.¹³

Filipino/Tagalog encodes love primarily through pagmamahal, which carries strong connotations of care, sacrifice, and nurturing rather than passionate desire. This would predict higher scores on sacrifice as necessary and potentially a more care-centered understanding of love generally.¹⁴

⁹Anna Wierzbicka, *Emotions Across Languages and Cultures: Diversity and Universals* (Cambridge: Cambridge University Press, 1999).

¹⁰Kuei-Hong Yeh, "Filial Belief and Parent-Child Conflict," *Asian Journal of Social Psychology* 7, no. 1 (2004).

¹¹Wierzbicka, *Emotions Across Languages and Cultures*.

¹²Zuzanna Bułat Silva, "Time in Portuguese Saudade and Other Words of Longing," *Cognitive Linguistics* 29, no. 1 (2018).

¹³Wierzbicka, *Emotions Across Languages and Cultures*.

¹⁴Bernardo Caslib, Jr., "Why 'Mahal' is Preferable: A Thomist Reading of the Concepts of Pag-ibig and Pagmamahal," *Kritike* 10, no. 2 (2016).

METHODS

A. Survey Design

The survey consisted of ninety-one Likert-scale items rated on a five-point scale from strongly disagree to strongly agree. Items were organized across four thematic domains: the necessary conditions of love, the relationship between different types of love, the moral and social weight of love, and love's ontological status as biological or cultural phenomenon. Two scenario-based items were included as complements to the abstract Likert items. Scenario A presented a conflict between a dying parent and a long-term romantic partner; Scenario B presented a conflict between a romantic partner and a deeply close friend. Concrete dilemmas tend to reveal conceptual commitments more reliably than abstract agreement scales, which was the reasoning behind their inclusion.

The survey was designed to probe conceptual structure rather than emotional experience. The goal was not to ask how love feels but what respondents believed love to be, require, and permit. Items were written in English and administered in English, which introduces a limitation discussed below. A free-response field at the end invited participants to reflect on what influenced their answers.

All seventy-eight free-response entries were read in full. They were not formally coded against a coding scheme; rather, they were reviewed for comments that either reinforced or complicated a quantitative pattern already visible in the Likert data. The three references cited in Section IV were selected after that quantitative analysis as illustrative examples of respondents articulating, in their own words, a pattern the numbers already suggested — they are not a representative or systematic sample of the free-response pool, and other respondents may have offered comments in tension with them that are not reflected here. This selection-after-the-fact procedure is a limitation rather than an independent line of evidence, and the free-response material should be read as illustrative color rather than as corroborating data.

The design process involved sustained attention to the problem of cultural neutrality, which proved difficult. Several items that seemed conceptually neutral in English carried implicit assumptions (about the primacy of romantic love, about love as a choice, about the relationship between love and individual autonomy) that are far from universal. This limitation was flagged by respondents themselves: one Filipino/Tagalog participant noted that “the Western individualism embedded in several of these questions was pretty visible,” and one Arabic-speaking participant noted the difficulty of questions that presupposed romantic love's priority over familial love as the default case. These observations are methodologically important and are returned to in the discussion.

B. Recruitment

Participants were recruited through Reddit through the *r/takemysurvey* subreddit. Participation was voluntary and anonymous. Respondents were asked to identify their first language and any other languages they spoke; first language was used as the primary grouping variable for analysis.

C. Sample

The final sample consisted of seventy-eight respondents across seventeen first-language groups, summarized in Table 1.

First Language	N	First Language	N
Spanish	12	Italian	3
Portuguese	9	Turkish	3
Hindi/Urdu	8	Russian	3
French	7	Korean	2
English	7	Polish	2
Mandarin	6	Vietnamese	1
Arabic	5	Swahili	1
German	4	Dutch	1
Filipino/Tagalog	4		

D. Statistical Approach

No inferential statistical tests (e.g., ANOVA, t-tests, or non-parametric equivalents) were conducted on the group differences reported in Section IV. All comparisons between language groups reported below are descriptive: they compare sample means without an accompanying test of whether the observed difference exceeds what would be expected from sampling variability alone, and without confidence intervals. Consequently, language in Section IV that might otherwise imply a confirmed effect (“divergence,” “patterns”) is used loosely, in the descriptive sense of “observed difference in sample means,” not in the sense of a statistically established effect. Readers should treat every comparison in Section IV as a hypothesis the raw means are consistent with, not as a demonstrated finding.

A further consequence of the absence of formal testing is that the reported comparisons have not been corrected for multiple comparisons. With ninety-one items compared across as many as seventeen groups, the number of possible pairwise comparisons is very large, and some fraction of the differences highlighted in Section IV would be expected to look sizable by chance alone even if no true underlying difference existed. No correction (e.g., Bonferroni or false discovery rate control) was applied. This is a substantive limitation of the analysis, and it is a central reason the claims in Section IV are framed as descriptive and hypothesis-generating rather than confirmatory.

E. Limitations

The most important limitation is sample size. The only language groups large enough to support even cautious claims are Spanish, Portuguese, Hindi/Urdu, French, English, Mandarin, and Arabic. Results for groups with fewer than five respondents, including German, Filipino/Tagalog, Italian, Turkish, Russian, Korean, Polish, Vietnamese, Swahili, and Dutch, are directionally interesting at most and should not be interpreted as representative of those language communities. Group means for these smaller groups are reported to one decimal place in what follows, and are flagged with an asterisk at each occurrence, as a reminder that the underlying group size (as few as one or two respondents in some cases) cannot support any claim of precision beyond that.

The use of first language as the grouping variable is imperfect. Many respondents were multilingual, sometimes speaking three or more languages at high proficiency. Bilingual and multilingual individuals likely experience conceptual blending across their languages in ways that complicate clean group assignment. Several respondents noted in their free responses that their answers felt inconsistent across the survey, which may reflect conceptual ambiguity rather than carelessness.

A deeper methodological issue concerns the relationship between linguistic and cultural variation. When Arabic speakers score higher on family priority items than French speakers, there is no clean way to determine whether that difference is driven by the structural features of Arabic or simply by the cultural context in which Arabic is embedded. Language and culture co-vary almost perfectly in this dataset, and separating their effects would require either natural experiments in which linguistic and cultural variables diverge, or a study design targeting multilingual speakers who operate across distinct cultural contexts and testing whether their conceptual responses shift depending on which language they are using.

This study attempted a partial workaround by recruiting participants who spoke English in addition to their first language, and who were therefore operating to some degree within a Western cultural frame. The reasoning was that shared exposure to English-language Western cultural context would hold culture somewhat constant across groups, leaving linguistic structure as the more variable factor. In practice, this workaround is imperfect at best. The degree to which any given respondent has internalized a Western cultural frame varies enormously and cannot be measured from language background alone. What it likely produced is a sample that is somewhat more culturally homogeneous than a general population study would be, which may actually suppress the differences found here rather than inflate them, but the confound cannot be fully resolved within this design.

The survey was administered in English, meaning respondents were reporting conceptual commitments in a language that may not be the one in which those commitments are most naturally organized. A properly powered follow-up study would translate and back-translate the survey into each target language.

Reddit recruitment skews toward educated, globally connected, relatively young participants. These are not representative samples of any language community in a general sense. They are samples of people within those communities who are online, English-comfortable, and willing to take a survey about love, and the results should be understood in that context.

RESULTS

As noted in Section III.D, no significance testing was performed on the comparisons below and no correction for multiple comparisons was applied; every comparison in this section is descriptive, based on raw sample means, and should be read as hypothesis-generating rather than as an established finding. Figures for the ten groups with fewer than five respondents (German, Filipino/Tagalog, Italian, Turkish, Russian, Korean, Polish, Vietnamese, Swahili, Dutch) are marked with an asterisk and rounded to one decimal place; these are the least reliable figures in the dataset and are reported for completeness rather than as evidence. Table 2 summarizes item means for all seventeen language groups across the items discussed in this section.

Language	N	Family priority	Sacrifice necessary	Love increases responsibility	Duty to love family	Decision/commitment framing	Sexual attraction necessary	Love as social construct
Spanish	12	3.3	3.8	4.5	2.6	3.1	3.4	3.1
Portuguese	9	3.0	3.6	3.8	2.7	2.9	2.8	3.4
Hindi/Urdu	8	4.4	4.1	4.5	3.8	3.8	3.2	2.2
French	7	3.0	3.1	3.9	2.9	2.7	2.9	3.0
English	7	3.0	3.7	3.6	2.6	3.9	3.3	3.1
Mandarin	6	3.7	2.7	3.7	3.5	3.0	3.3	3.0
Arabic	5	4.4	4.2	4.4	3.2	2.0	3.2	2.6
German*	4	2.5	2.2	4.2	2.3	3.8	3.2	3.0
Filipino/Tagalog*	4	3.5	3.2	4.0	3.5	2.2	3.2	3.5
Italian*	3	3.0	2.7	3.7	2.7	3.0	4.0	4.3
Turkish*	3	2.3	3.3	4.0	2.7	2.7	1.7	1.7
Russian*	3	2.7	4.3	4.3	3.3	3.7	3.7	3.7
Korean*	2	3.0	3.5	4.0	3.0	3.5	3.5	3.5
Polish*	2	3.5	3.0	4.0	2.5	3.5	5.0	3.0
Vietnamese*	1	3.0	2.0	4.0	2.0	3.0	1.0	3.0
Swahili*	1	4.0	4.0	5.0	1.0	3.0	2.0	1.0
Dutch*	1	1.0	3.0	5.0	2.0	2.0	4.0	4.0

A. Cross-Cultural Convergence

The most striking feature of the dataset is the convergence. Several items produced high agreement across virtually every language group, with narrow variance, and that pattern is itself a finding, one that is consistent with the biological universalism account at the level of love's phenomenological core.

The highest cross-group agreement in the dataset was on the item “love always involves caring for the other person's well-being,” which produced an overall mean of approximately 4.2 with narrow variance across groups. This item, which asks about what love fundamentally is rather than what it requires or permits, showed the least descriptive variation by language group of any item in the survey. Whether a respondent's first language was Arabic or German or Mandarin or Swahili, there was near-universal agreement that caring for the other person is constitutive of love in a way that transcends cultural framing.

“Genuine love must be freely chosen” produced similarly high and consistent scores across groups (overall ~3.9). This is interesting because it sits in some tension with the high obligation scores produced by Arabic and Hindi/Urdu speakers on other items, suggesting that even respondents who believe love generates strong obligations tend to believe the love itself must originate in freedom rather than compulsion. The feeling is freely given; what it then obligates is a separate question.

Other items showing strong cross-group convergence included “love changes who you are as a person,” “love exists in all cultures,” “every human being is capable of love,” and “love is part of human nature.” These items cluster around love's universality and its identity-shaping force, the dimensions most plausibly grounded in the biological substrate Fisher identifies.

Taken together, these convergence items suggest a cross-cultural conceptual core: love involves caring, it is universal, it is identity-shaping, and it must originate in freedom. This core held across languages that differ dramatically in how they encode love's obligations and categories, which is what the synthesis position in Section II.C would predict.

B. Cross-Cultural Descriptive Differences

Against this convergent core, a set of items produced meaningful differences in sample means across language groups, differences that are, in most cases, directionally consistent with the linguistic features identified in the theoretical framework. As stated above, none of these comparisons were statistically tested, so the language below (“diverge,” “track”) describes the direction and shape of the raw means, not a confirmed effect.

Family vs. Romantic Priority

The largest descriptive difference in the dataset concerned the relative priority of family and romantic love. Arabic speakers scored “family relationships should take priority over romantic relationships” at 4.4, Hindi/Urdu speakers at 4.4, compared to French speakers at 3.0, German* speakers at 2.5, and

English speakers at 3.0. This is not a small difference on a five-point scale, though, absent a significance test, it cannot be said to exceed chance variation with any stated confidence.

The scenario-based items reinforced this pattern descriptively. In Scenario A, the conflict between a dying parent and a long-term romantic partner, Arabic and Hindi/Urdu speakers were more likely to say that leaving the parent would be morally wrong, and less likely to say the romantic relationship should take priority. The pattern recurs across multiple related items rather than appearing on a single question, which makes it more credible as a signal worth testing further, even though it has not itself been statistically tested.

This is directionally consistent with the linguistic features predicted to drive it. Both Arabic and Hindi/Urdu embed familial obligation in their kinship terminology and cultural-linguistic scripts in ways that French, German, and English do not. The conceptual architecture these languages build around love may encode family relationships as carrying a moral weight that romantic relationships cannot simply override, and the survey results are consistent with, though they do not prove, that encoding.

Portuguese is worth noting as an interesting case within the Romance family. Portuguese speakers scored family priority higher than Spanish or French speakers, in a direction that aligns more with Arabic and Hindi/Urdu. This may reflect the specific cultural-linguistic scripts around family obligation in Lusophone cultures, or the influence of *saudade*, though with only nine respondents and no exact comparative figure computed for this item, considerable caution is warranted.¹⁵

Sacrifice and Obligation

A related cluster of items concerned love's obligatory dimensions. "Sacrifice is necessary for something to be love" produced Arabic scores of 4.2 and Hindi/Urdu scores of 4.1, compared to Italian* scores of 2.7, Mandarin scores of 2.7, and Portuguese scores of 3.6. "Love increases responsibility toward the other person" showed Arabic at 4.4 and Hindi/Urdu at 4.5, against French at 3.9 and English at 3.6. "A person has a duty to love their family" showed Hindi/Urdu at 3.8 and Arabic at 3.2, against French at 2.9 and German* at 2.3.

The pattern is descriptively consistent: languages with more grammatically and lexically encoded familial obligation tend to produce higher raw scores on obligation-related items. This is the clearest descriptive case in the dataset for linguistic categorization shaping conceptual architecture — the experience of love may be the same, but what it is understood to require appears, in these raw comparisons, to differ along lines that track linguistic structure. Whether that difference is real rather than a product of sampling variation and multiple comparisons is precisely what a significance-tested follow-up would need to establish.

¹⁵Bulat Silva, "Time in Portuguese Saudade."

Love as Feeling vs. Decision

The items asking whether love is primarily a feeling or primarily a decision and commitment produced a descriptive split that maps onto the Germanic/Semitic language grouping more clearly than the familial obligation pattern. Germanic language speakers (German* with 3.8 on decision/commitment and English at 3.9) leaned more toward a decision or commitment framing of love than Arabic speakers (2.0) or Turkish* speakers (2.7), who scored notably lower on this framing.

Arabic speakers score high on obligation but low on decision, suggesting that for them, love's obligations may be experienced as natural and given rather than as the product of a chosen commitment. The love itself is felt; the obligations it generates are structural rather than elected. Germanic speakers, by contrast, appear in this raw comparison to conceptualize love itself as partly constituted by the decision to commit, which may reflect cultural-linguistic scripts around autonomy and rational agency that are more central to Germanic linguistic culture than to Semitic or Turkic ones.

Sexual Attraction as Necessary

Turkish* speakers produced the lowest score on “sexual attraction is necessary for something to be love” (1.7), while Italian* speakers produced the highest (4.0). The Turkish result is directionally consistent with the *aşk/sevgi* distinction, *sevgi* being a warm, non-sexually-charged love applicable to family and friends, though with only three Turkish respondents this cannot be stated with any confidence. The Italian result is directionally consistent with cultural-linguistic scripts around passionate love as love's paradigm case, though it rests on the same three-respondent limitation.

Mandarin speakers fell in the middle (3.3), consistent with a more relational and less passion-centered conceptualization of love that aligns with the kinship-heavy framing of Mandarin's love-adjacent vocabulary.

Biology vs. Social Construction

The items asking whether love is primarily a biological response or primarily a social construct produced a descriptive split that cuts somewhat differently from the others. Russian* speakers scored notably higher on “love is primarily a social construct” (3.7 vs. an overall mean of approximately 3.1), and French speakers also leaned toward the social construction end, though without an exact comparative figure computed for French on this item. Hindi/Urdu and Arabic speakers leaned more biological, treating love as natural and given rather than constructed.

One Russian respondent explicitly called the either/or framing of the biology/social construct items a false dichotomy, arguing that both are true and that the survey's framing forced an artificial choice. This single comment, selected after the quantitative pattern was already visible (see Section III.A), is offered as illustrative rather than as independent evidence, but it does point to a real limitation in how the item was posed.

The French result is consistent with a cultural-linguistic tradition that associates love with performance, construction, and deliberate cultivation, a script visible in French literature and philosophy that has no clean equivalent in Arabic or Hindi/Urdu cultural-linguistic tradition. This remains, like the rest of Section IV, a descriptive and untested observation.

Cross-Love Comparisons

Several items asked respondents to compare romantic love to familial love and friendship. “Friendship can be as important as romantic partnership” scored high across most groups, with Spanish and Portuguese speakers particularly strong, possibly reflecting cultural-linguistic scripts in which friendship (*amistad*, *amizade*) carries significant relational weight. “Love for family is stronger than love for a partner” showed Arabic and Hindi/Urdu highest, French and German* lowest, reinforcing the family priority pattern noted above. “Different kinds of love are equally valid” produced near-universal high agreement, which sits in interesting tension with the strong rankings respondents produced when forced to choose in Scenario A, suggesting that the abstract principle of love's equality is held alongside concrete hierarchies that get activated under pressure.

DISCUSSION

A. What the Patterns Mean

The convergence/divergence split in this dataset maps cleanly onto the theoretical synthesis this paper proposed at the outset. Items tapping the phenomenology of love, what it feels like, what it does to identity, whether it is universal, converged across language groups in ways consistent with Fisher's biological universalism. Items tapping the conceptual architecture around love, what it obligates, how it ranks against other loves, whether it is primarily a feeling or a decision, diverged in ways that track the linguistic features identified in the framework section.

This is not a trivial finding even given the sample size limitations. The divergence is patterned, and the pattern corresponds to what the linguistic analysis would predict. Arabic and Hindi/Urdu speakers diverge from Germanic and Romance speakers on precisely the items where their languages most distinctly encode familial obligation. Turkish speakers diverge on sexual attraction items in ways consistent with the *aşk/sevgi* distinction. French and Russian speakers diverge toward social construction in ways consistent with cultural-linguistic scripts that have no equivalent in Semitic languages. The correspondence between linguistic structure and survey divergence is imperfect, it always would be, but it is not accidental.

The most important conceptual contribution of this paper is the distinction between love's phenomenological core and its conceptual architecture, a distinction that explains why biological universalism and linguistic relativity need not be in conflict. They are describing different levels of the same phenomenon. Fisher is right that the experience is universal. Boroditsky's framework is right that linguistic structure shapes conceptual organization. The boundary between those two levels is what this

paper tries to locate, and the data suggests it falls somewhere between the affective and the evaluative, between what love feels like and what it is taken to mean.

B. Which Linguistic Features Seem to Be Most Impactful

The clearest signal in the dataset comes from the familial obligation encoding in Arabic and Hindi/Urdu. Across multiple related items, including family priority, sacrifice, moral obligation, the scenario responses, these two groups consistently diverge from the Western European languages in ways that track their linguistic structure. This is the strongest case for the weak Sapir-Whorf claim in the dataset.

The second clearest signal comes from the feeling/decision split along the Germanic/Semitic axis. The cultural-linguistic scripts around autonomy and rational agency embedded in Germanic languages appear to shape how respondents conceptualize love itself, as partly constituted by decision rather than purely given as feeling. This is subtler than the obligation finding but consistent across multiple items.

The passionate/companionate lexical distinction (Turkish *aşk/sevgi*, Arabic *hubb/ishq*) is directionally interesting but under-powered in this dataset. The Turkish result on sexual attraction is consistent with prediction, and the Arabic pattern on feeling vs. decision is suggestive, but larger samples would be needed before anything confident can be said.

The Romance language internal variation, particularly Portuguese diverging from France and Spain on family priority, suggests that cultural-linguistic scripts matter alongside grammatical structure, and that shared roots do not guarantee shared conceptual architecture.

There is, however, a reason to be cautious about treating the language/culture confound as fully disqualifying. The confound assumes that language and culture are separable in principle, that culture is the real driver of the differences observed and language is merely along for the ride. But this assumption is itself contestable. The Sapir-Whorf tradition, in its more ambitious formulations, holds that linguistic structure shapes cultural practice over time, that the distinctions a language makes available influence what its speakers collectively notice, value, and institutionalize. On this view, the fact that Arabic grammatically encodes familial obligation and Arabic-speaking cultures place high value on familial obligation is not a coincidence that renders the linguistic account superfluous. It may be evidence that the linguistic structure and the cultural value are causally related, with language doing part of the work of transmitting and stabilizing the cultural pattern across generations.

The honest position is that it would be extremely difficult, possibly impossible with any standard survey design, to fully separate the contribution of linguistic structure from the contribution of cultural context. What can be said is that the structural linguistic differences across the language groups in this dataset do line up with the observed divergence in conceptually predicted ways. Arabic and Hindi/Urdu's grammatical encoding of familial obligation predicts higher family priority scores, and that is what the data shows. Turkish's lexical distinction between passionate and companionate love predicts lower scores on sexual attraction as necessary, and that is directionally what the data shows. The correspondence is not proof of linguistic causation, but it is consistent with it, and the alternative, a purely cultural account that

treats the linguistic features as incidental, has to explain why the linguistic and cultural patterns align so consistently across unrelated language families.

C. Where the Data Is Inconclusive

The groups with fewer than five respondents, including Italian, Turkish, Russian, Korean, Polish, Vietnamese, Swahili, and Dutch, produced directionally interesting patterns that cannot be stated as findings. They can instead be seen as hypotheses for a better-powered study.

The survey instrument's cultural assumptions remain a limitation. The Western, individualist framing of several items may have suppressed divergence, with respondents answering within an English-language Western frame even if their native conceptual architecture differs. This is the most serious methodological concern and the hardest to address without a fully translated instrument.

D. What a Better Study Would Need

A follow-up study adequate to the questions this paper raises would need a minimum of thirty respondents per language group; participants who are monolingual or early bilingual to reduce conceptual blending; a survey translated and back-translated into each target language rather than administered in English; qualitative interviews alongside Likert items to capture the reasoning behind positions rather than just the positions themselves; and controls for education, religiosity, and urban/rural background, all of which likely interact with language in shaping love's conceptual architecture.

This is a significant undertaking and also a worthwhile one. The questions are real, and the methodology, at larger scale and with better instrumentation, is capable of producing more definitive answers.

E. Broader Stakes

If linguistic categorization shapes the conceptual architecture of love, not the feeling but what the feeling means and what it demands, the implications extend beyond survey methodology. Cross-cultural romantic relationships involve differing conceptual frameworks for what love is understood to require. A partner raised in a language that embeds familial obligation deeply in its love vocabulary may experience genuine love as naturally generating obligations that a partner raised in a language of individual autonomy experiences as external impositions. Neither is wrong about what love means to them—they are operating from different conceptual architectures, shaped in part by the languages in which they first learned to think about love.

Translation of emotional concepts across languages is always partial, and what this paper suggests is that the partiality is not arbitrary. It is structured by the same linguistic features that shape conceptual organization more broadly, mapping onto the specific dimensions, obligation, family priority, the feeling/decision distinction, where this survey found its clearest divergence.

The universalism embedded in Western psychological models of love is worth interrogating in light of these results. Love as chosen commitment, love as ranked below individual autonomy in cases of conflict, love as primarily dyadic rather than embedded in family networks: these are features of a particular linguistic and cultural tradition, not universal features of how love is conceptualized, and they should be recognized as such.¹⁶

CONCLUSION

Language cuts the world at the joints. It does not invent the things it cuts—love was there before any language named it, rooted in neurological systems older than speech. But the joints it makes are real, and they shape what we notice, what we assume, and what we take to need explanation. A speaker of Arabic and a speaker of German may be having something recognizably similar when they fall in love: the same dopamine, the same pull toward another person, the same sense of the world reorganizing itself around a new center of gravity. What they are having is not identical. The conceptual architecture their languages have built around that experience, what it obligates, how it ranks, whether it is primarily a feeling or a decision or a duty, differs in ways that are neither accidental nor trivial.

This paper did not prove linguistic relativity in the domain of love. It found the shape of where linguistic relativity operates and where it doesn't, a biological core that language does not substantially reshape, and a conceptual architecture at love's margins that language structures in patterned and predictable ways. That distinction is what the data supports, imperfectly but suggestively, across seventy-eight respondents and seventeen languages.

The interesting question is not whether love is universal. It is. The interesting question is what universality leaves open. And the answer, it turns out, is quite a lot.

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