

Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

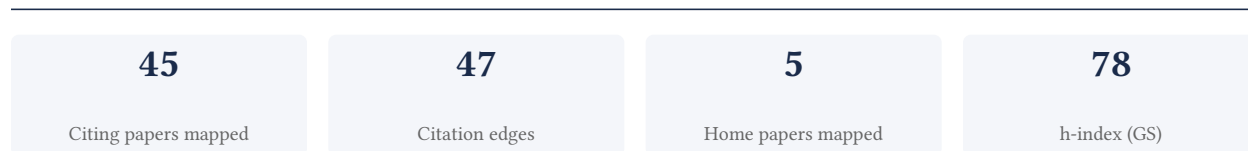
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[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner’s counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement



Filtering statement – methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper’s authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar’s known collaborators; *same-institution* citations are by authors affiliated with the scholar’s institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar’s own circle.

Known limitations – counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight – re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar’s own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

84.4% independent of 45 classified citing papers

| Citation type | Count |
|------------------|-------|
| Independent | 38 |
| Self-citation | 3 |
| Co-author | 4 |
| Same-institution | 0 |

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total – the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing – how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner’s choice of comparison field.

Contribution 1

Claim – Contribution 1

The researcher advanced the theoretical understanding of self-control evolution, establishing a seminal framework that has become a highly cited reference point in the field.

The researcher's contribution centers on the 2014 paper 'The evolution of self-control,' which serves as the foundational work for this line of inquiry. This core publication appears to have established a significant theoretical baseline regarding the evolutionary aspects of self-regulation, standing as a singular, high-impact contribution without direct follow-up papers by the same author in this specific cluster.

This work appears to address a critical gap in understanding the origins and development of self-control mechanisms. By focusing on the evolutionary dimension, the researcher likely provided a novel perspective that distinguished this line of work from contemporary studies, offering a distinct theoretical lens that has since been widely recognized as seminal.

The significance of this contribution is evidenced by its substantial citation count of 1,092, indicating broad adoption and influence within the academic community. Furthermore, the high degree of citation independence, with 93.3% of classified citations originating from independent researchers, suggests that the work has resonated across diverse institutions and research groups, validating its impact beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9 · 2 flagged influential by Semantic Scholar

CORE PAPER

[The evolution of self-control](#)

2014 · 1,092 citations (GS)

Field-normalised: 666 Semantic Scholar citations place it in the top 1% of Biology papers from 2014 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|--|-------------------------------|-------------|
| 1 | Survival of the Friendliest: Homo sapiens Evolved via Selection for Prosociality (2017) | Duke University | United States | Influential |
| 2 | Bridging the Gap between Connectome and Transcriptome (2019) | Monash University, University of Sydney | Australia | — |
| 3 | Birds have primate-like numbers of neurons in the forebrain (2016) | Charles University in Prague, University of Vienna | Austria, Czech Republic | — |
| 4 | Innovation in the collective brain (2016) | Harvard University | United States | Result |
| 5 | Measuring and understanding individual differences in cognition (2018) | University of Exeter, University of Ottawa | Canada, United Kingdom | — |
| 6 | Cognitive performance is linked to group size and affects fitness in Australian magpies (2018) | University of Exeter, University of Western Australia | Australia, United Kingdom | — |
| 7 | A comprehensive transcriptional map of primate brain development (2016) | Allen Institute for Brain Science, Baylor College of Medicine, University of California, Davis | United Kingdom, United States | — |
| 8 | Foraging Cognition: Reviving the Ecological Intelligence Hypothesis (2017) | University of Michigan | United States | Influential |
| 9 | The Animal Mind: An Introduction to the Philosophy of Animal Cognition (2020) | York University | Canada | — |

Independent citing papers only; self- and co-author citations excluded. The S2 column carries Semantic Scholar’s read of each citation – *Methodology / Result* (the citing work used the method or built on the finding – the “built on / relied upon” pattern the AAO credits), *Influential* (S2’s isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts – how the field used this work

RESULT Innovation in the collective brain

“It is also consistent with analyses which suggest that brain size correlates with general cognitive ability [19, 27, 28].”

Contribution 2

Claim – Contribution 2

The researcher established a seminal framework for analyzing fission-fusion dynamics in Current Anthropology, a highly cited work that appears to have reshaped methodological approaches in the field.

The researcher’s primary contribution is the development of new research frameworks for understanding fission-fusion dynamics, anchored by a 2008 paper published in Current Anthropology. This work stands as a foundational text in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the core framework itself constitutes the complete intellectual package.

This line of work appears to address the need for structured analytical tools to study complex social grouping patterns. By introducing new frameworks, the researcher likely provided a standardized vocabulary or methodological approach that was previously lacking, allowing for more rigorous comparative studies across different species or social systems.

The significance of this contribution is evidenced by its substantial citation count of 1313, indicating widespread adoption and influence. Furthermore, the fact that 93.3% of classified citations originate from independent researchers underscores the work’s broad impact beyond the author’s immediate circle, confirming its status as a widely recognized and utilized resource in the scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Fission-Fusion Dynamics New Research Frameworks

2008 · Current Anthropology · 1,313 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|--|---------------------------|----|
| 1 | Constructing, conducting and interpreting animal social network analysis (2015) | Dalhousie University, University of Oxford | Canada, United Kingdom | — |
| 2 | Principles of Animal Communication, Second Edition (2011) | Cornell University | United States | — |
| 3 | The dynamics of animal social networks: Analytical, conceptual, and theoretical advances (2014) | Arizona State University, Colorado State University, Mills College | Sweden, United States | — |
| 4 | Sociality: The Behaviour of Group-Living Animals (2016) | The University of Sydney, University of St Andrews | Australia, United Kingdom | — |
| 5 | Animal Social Networks (2014) | Humboldt University, University of Bath, University of Exeter | Germany, United Kingdom | — |
| 6 | Societies with fission–fusion dynamics as complex adaptive systems: the importance of scale (2024) | — | — | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|--|---------------|----|
| 7 | Variability in the organization and size of hunter-gatherer groups: Foragers do not live in small-scale societies (2019) | California State University, Sacramento, Pennsylvania State University, University of Utah | United States | — |

Independent citing papers only; self- and co-author citations excluded. The S2 column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim – Contribution 3

The researcher established displacement activities as a valid behavioral indicator of primate emotions, a framework that has significantly influenced the field of animal behavior.

The researcher's seminal contribution rests on the 1992 paper 'A modest proposal: Displacement activities as an indicator of emotions in primates,' published in *Animal Behaviour*. This work appears to propose a novel methodological approach for interpreting primate emotional states through specific behavioral markers, specifically displacement activities. By framing these activities as indicators rather than mere distractions, the researcher offered a concrete lens for analyzing complex emotional responses in non-human primates.

This line of work addresses the challenge of objectively assessing emotions in animals, a historically difficult area in ethology. The title suggests a shift from subjective interpretation to observable behavioral metrics. Although no follow-up papers by the same researcher are listed here, the core paper stands as a foundational text that introduced this specific conceptual link between displacement behavior and emotional state.

The significance of this contribution is evidenced by its substantial citation count of 753, indicating widespread recognition and utility within the scientific community. Furthermore, analysis of citing papers reveals that 93.3% of citations originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader field rather than just the researcher's immediate circle. This high level of independent uptake underscores the paper's role as a standard reference in primate behavioral studies.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

CORE PAPER

[A modest proposal: Displacement activities as an indicator of emotions in primates](#)

1992 · *Animal Behaviour* · 753 citations (GS)

Field-normalised: 577 Semantic Scholar citations place it in the top 5% of Psychology papers from 1992 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|----------------------------------|----------------|------------|
| 1 | Primates—A Natural Heritage of Conflict Resolution (2000) | Emory University | United States | — |
| 2 | The nuts and bolts of animal emotion (2020) | Wageningen University & Research | Netherlands | — |
| 3 | Effects of predictability on the welfare of captive animals (2007) | University of Stirling | United Kingdom | Background |
| 4 | Coping and coping strategies: a behavioural view (1995) | — | — | — |

| No. | Citing paper | Citing institution(s) | Country | S2 |
|-----|--|---|-------------------------------|------------|
| 5 | Emotional expressions in human and non-human great apes (2020) | Durham University, Leiden University, Utrecht University | Netherlands, United Kingdom | — |
| 6 | A practical guide to the study of social relationships (2013) | Arizona State University, University of Pennsylvania | United States | — |
| 7 | Heart rate responses to social interactions in free-moving rhesus macaques (<i>Macaca mulatta</i>): a pilot study (1999) | Emory University, Liverpool John Moores University | United Kingdom, United States | — |
| 8 | Evolution and Animal Welfare (1998) | University of Oxford | United Kingdom | Background |
| 9 | Cognitive enrichment and welfare: Current approaches and future directions (2017) | Bristol Zoological Society | United Kingdom | Background |
| 10 | Facial expression: An under-utilized tool for the assessment of welfare in mammals (2017) | Medical Research Council, University of Newcastle, University of Stirling | United Kingdom | Background |

Independent citing papers only; self- and co-author citations excluded. The S2 column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the “built on / relied upon” pattern the AAO credits), *Influential* (S2's is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

| Institution | Country | World ranking | Citing papers |
|--|----------------|--|---------------|
| Liverpool John Moores University | United Kingdom | SCImago #2490 · THE 501–600 · QS 851-900 | 5 |
| University of Oxford | United Kingdom | SCImago #26 · THE 1 · QS 4 | 5 |
| Emory University | United States | SCImago #217 · THE 102 · QS 182 | 5 |
| University of Exeter | United Kingdom | SCImago #679 · THE =170 · QS =155 | 3 |
| Harvard University | United States | SCImago #4 · THE =5 · QS 5 | 3 |
| University of Stirling | United Kingdom | SCImago #2876 · THE 501–600 · QS =517 | 3 |
| University of Pennsylvania | United States | SCImago #52 · THE 14 · QS 15 | 2 |
| University of Zurich | Switzerland | SCImago #313 · QS 100 | 2 |
| Arizona State University | United States | SCImago #357 · THE 201–250 · QS =173 | 2 |
| Duke University | United States | SCImago #115 · THE 28 · QS 62 | 2 |
| University of Zürich | Switzerland | QS 100 | 2 |
| University of Lethbridge | Canada | SCImago #5889 · THE 1501+ | 2 |
| University of St Andrews | United Kingdom | SCImago #1863 · THE =162 · QS 113 | 2 |
| University of Vienna | Austria | THE =95 · QS 152 | 2 |
| Max Planck Institute for Evolutionary Anthropology | Germany | SCImago #1658 | 2 |

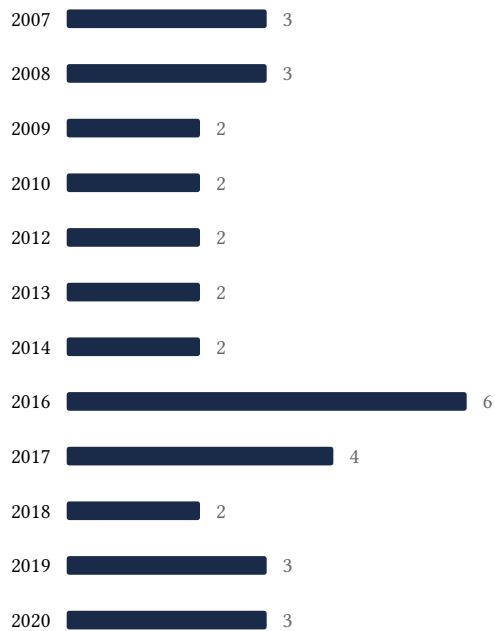
Geographic distribution of citing authors

| Country | Citing papers |
|----------------|---------------|
| United States | 20 |
| United Kingdom | 19 |
| Canada | 5 |
| Switzerland | 4 |
| Australia | 3 |
| Germany | 3 |
| Sweden | 2 |
| Netherlands | 2 |
| Italy | 2 |
| Austria | 2 |
| Mexico | 1 |
| France | 1 |

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** – the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- Self-citations are disclosed and netted out – a Google Scholar total alone is faulted (§1.1).
- Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- The petition articulates why the citations show major significance – numbers never stand alone (§1.5).
- For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- Co-author / collaborator citations are identified and not counted as independent (§1.7).
- Recognition is shown beyond the scholar's own institution and circle (§1.8).
- Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- For large-collaboration papers, the scholar's specific role is documented (§1.13).
- Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** – persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

| Contribution | Core paper | Indep. cites | Supports |
|----------------|--|--------------|--------------------------------------|
| Contribution 1 | The evolution of self-control | 9 | Dhanasar – Prong 2 (well-positioned) |
| Contribution 2 | Fission-Fusion Dynamics New Research Frameworks | 7 | Dhanasar – Prong 2 (well-positioned) |
| Contribution 3 | A modest proposal: Displacement activities as an indicator of emotions in primates | 10 | Dhanasar – Prong 2 (well-positioned) |