PerspectroScope:
A Window to the World of Diverse Perspectives

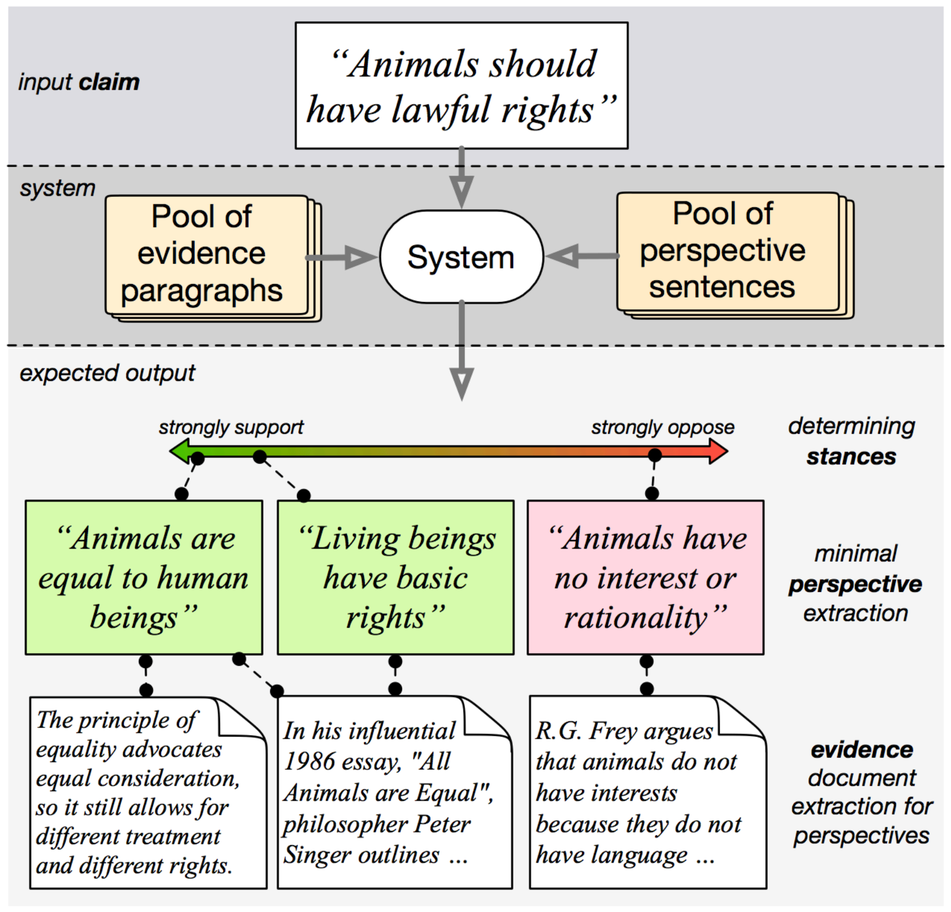
Sihao Chen, Daniel Khashabi, Chris Callison-Burch, Dan Roth
University of Pennsylvania

1. Motivation

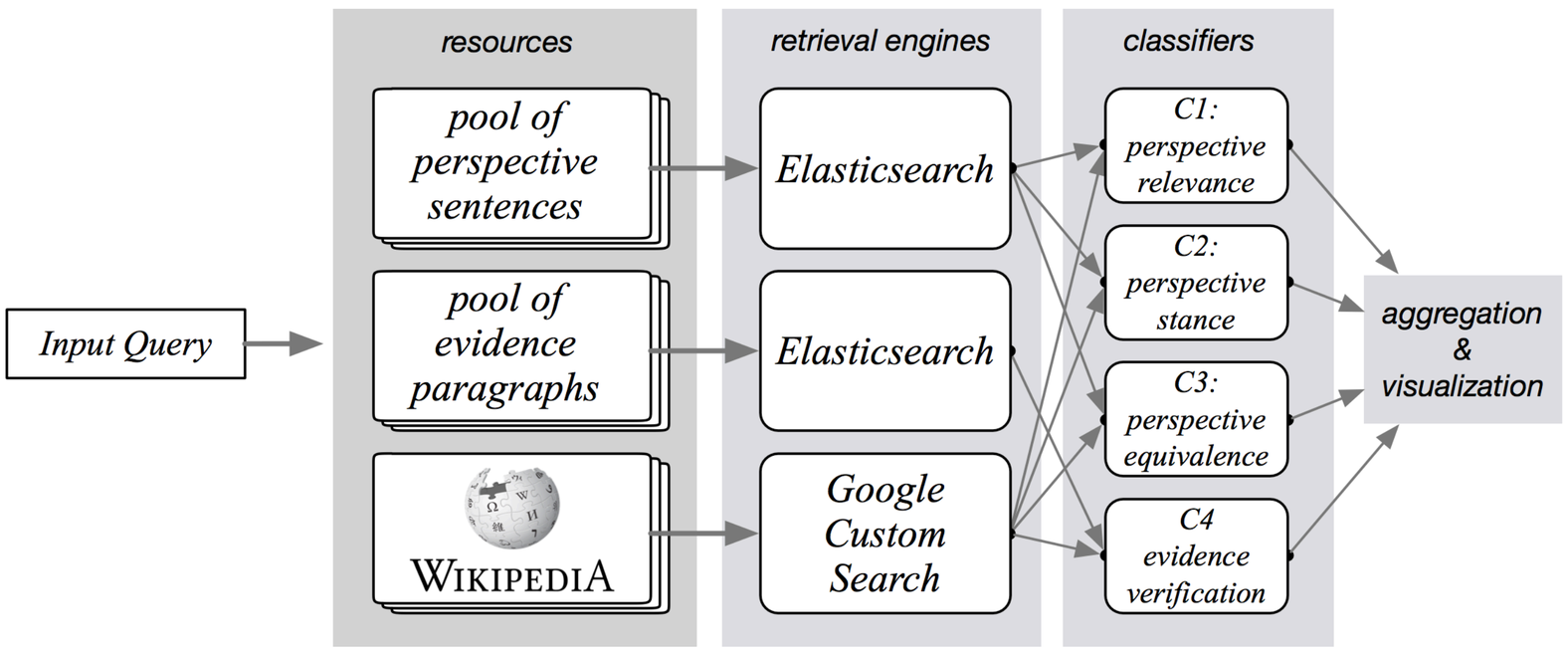
Most discussion-worthy *claims* don't have a single correct answer. Understanding such non-trivial claims usually requires insights from various *perspectives.*

Ideally, we want to develop an automatic system to discover and identify such *perspectives*, along with supporting *evidence paragraphs*.

With the **Perspectrum** dataset proposed in Chen et. al. (2019), we present **PerspectroScope**, an open-source web-based system that extracts and visualizes a diverse set of web perspectives with respect to an input claim.



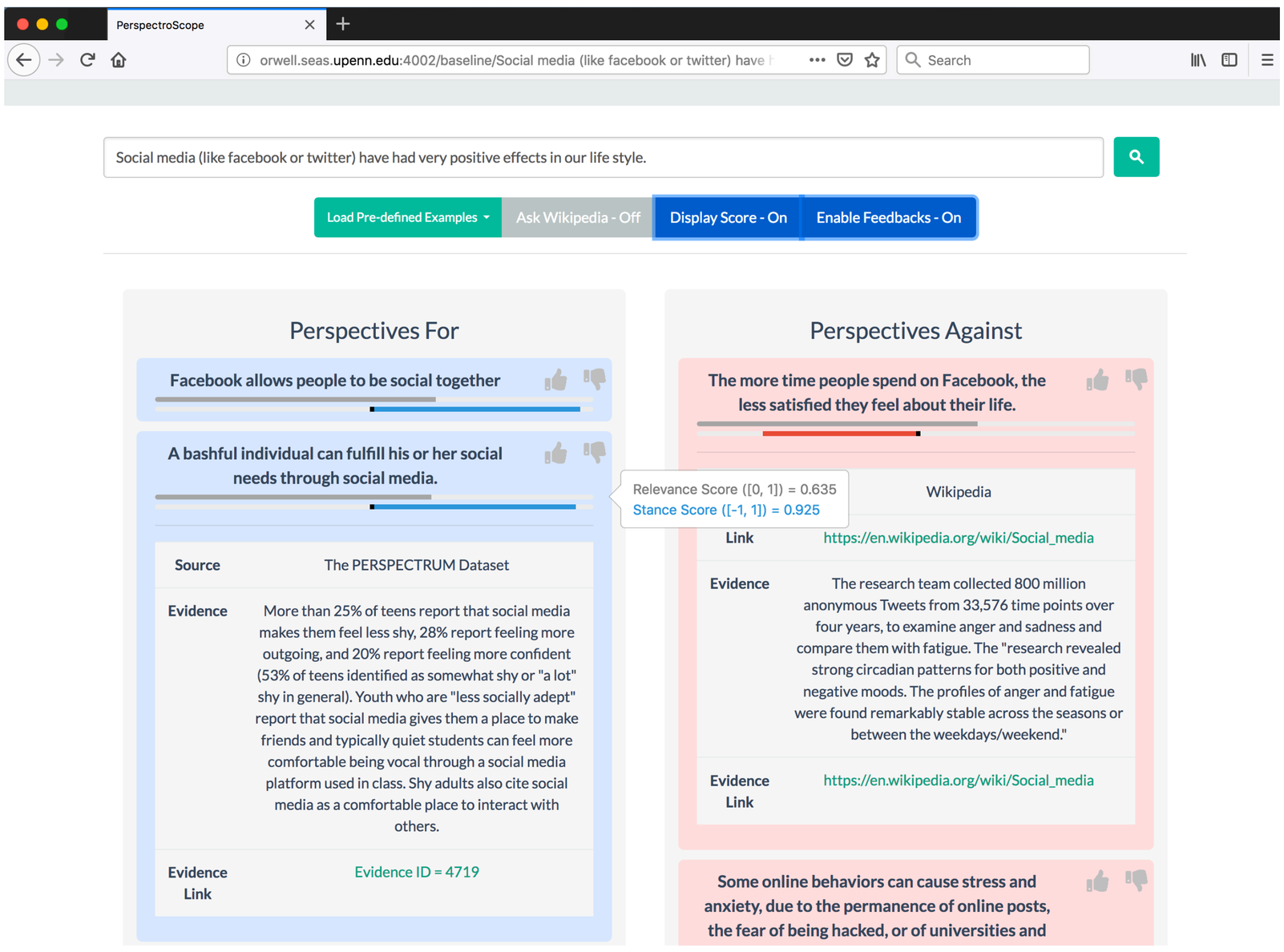
2. System Design



Algorithm 1: Minimal Perspective Extraction

Input: claim c.
Output: perspectives, their stances & evidence.

```
P̂ ← IR(c) // candidate perspectives
P = {}
foreach p ∈ P̂ do
    // perspective relevance
    if C1(c, p) > T1 and abs(C2(c, p)) > T2 then
        e ← C2(c, p)
        Ê ← IR(c, p) // candidate evidence
        E = {}
        foreach e ∈ Ê do
            // evidence verification
            if C4(c, p, e) > T4 then
                E ← E ∪ {e}.
            end
        end
        P ← P ∪ {(p, s, E)}.
    end
end
P ← /* minimal perspectives after
     clustering with DBSCAN on the
     equivalence scores between any
     perspective pairs via C3.      */
```



3. Interface Design

Perspective Visualization: Retrieved perspectives are placed into For/Against column and ranked by their relevance.

Evidence Retrieval: Upon user request, the system retrieves the most likely evidence for the perspective.

User feedback: Users have the option to tell us whether a perspective is good or not based on the quality of the predictions.

PerspectroScope demo is live at http://orwell.seas.upenn.edu:4002

PerspectroScope is available at https://github.com/CogComp/perspectroscope/

Check out the **Perspectrum** dataset at https://cogcomp.org/perspectrum/

References

S. Chen, D. Khashabi, W. Yin, C. Callison-Burch, and D. Roth. Seeing Things from a Different Angle: Discovering Diverse Perspectives about Claims. *In NAACL 2019.*

Acknowledgement

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