

(A) Abstract anatomy of an attribution

At the highest level of abstraction, attributions describe one of these frames:

(1) *A (possibly implicit) communicative agent issues an artifact, makes an act of expression, or holds an internal state representing something.*

(2) *An artifact expresses or represents something.*

Give preference to (1); resort to (2) when it is the only reading available.

(B) Attribution Phenomena

At an intermediate level of abstraction, an attribution describes one of the following frames:

- (1) *A source's statement about something.*
- (2) *A source's decree of something.*
- (3) *A source's intention to do something.*
- (4) *A source's knowledge of something.*
 - └ *source's belief in something.*
 - └ *source's understanding of something.*
 - └ *source's contemplation of something.*
 - └ *source's perception of something.*
- (5) *A source's desire for something.*
 - └ *source's like or dislike of something.*
 - └ *source's attitude about something.*
 - └ *source's support for something.*
 - └ *source's feeling about something.*

(C) Principles of invariance

These transformations don't grossly affect annotation. Use this fact to simplify complex cases.

- (1) Nominalization of the cue:
He argued about thing. ↔ *He had an argument about thing.*
- (2) Modifying / adding modals, negation, conditionals, adverbs, auxiliary verbs, and tense:
If it were raining, she would not have exuberantly said "Hi!" ↔ *She says "Hi!"*
- (3) Movement:
John was named best employee by Sally. ↔ *Sally named John best employee.*

Note: Be aware that movement can affect cues due to the single-contiguous-cue rule; no such rule applies to sources or content.

(D) Attribution Patterns

Annotate your articles in a way that is consistent with these examples. Any internal inconsistencies should be brought to the PIs attention for review!

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(1) *Source said thing.* (↑)

Attribution, plain and simple.

- (a) *Jimroy said “Sally can’t stay.”*
- (b) *The spokeswoman said the company is “proud” of its product.*
- (c) *The man thrashed about and said “You can’t stop me!”*
- (d) *“Let’s not rush,” said Jimroy, Head of Finance at Blumegard. “Time is on our side.”*
→ *Jimroy said “Let’s not rush. Time is on our side.”*
- (e) *It will be pursued in the Senate, he said.*
Note: comma is excluded.
- (f) *“I’m disappointed,” he said. “He was a let down.”*
Note: first period is not in content span.
- (g) *She disapproved of the deal. “It was terrible.”*
Note: first period is not in content span.
- (h) *Senator Blumenthal said he will continue to push. “This is far from over.”*
Note: first period is not in content span.

(2) *Unusually formatted source said thing.* (↑)

Variations on the structure of sources. To decide if an elaborating description of the source should be annotated, ask yourself these questions, if your answer is yes to any, include the elaboration as part of the source: (1) Does it help to identify the source? (2) Does it establish the relevance of the attribution? (3) Does the author intend it to help you interpret the statement, e.g. by establishing the level of credibility?

- (a) *The giants—Facebook, Google, and Microsoft—all proposed a new deal.*
- (b) *Sally, who has irrelevant characteristics not related to identifying her as the source, and Dave, who also has irrelevant characteristics, both know Steve is lying.*
→ Sally and Dave both know Steve is lying.
- (c) *Sally, who is the drummer, says she joined the band to live a bohemian lifestyle.*
Note: here the subordinate clause describing the source seems essential to identifying the source.
Note: The comma terminating the source is included, because, paired with the first comma, it acts like a closing parenthesis.
- (d) *Richard, 46, with no hair, says he likes cream cheese.*
- (e) *Richard, from Kentucky, says he voted for Trump.*
- (f) *A protester, dressed in baggy clothes with a ripped shirt, says he rages against the machine every chance he can get.*
Note: here we imagine that the author intends the description of the protester as a discount on their credibility

(3) *Source peculiarly exclaimed thing.* (↑)

This provides a long list of not-so-straightforward cues.

- (a) *Jimroy railed against the establishment Republican position.*
- (b) *The central bankers admitted as a group that inequality had worsened.*
Note: here *as a group* is read as the manner of *admitted*.
- (c) *The Council seems to equate religious liberty with a right to discriminate.*
- (d) *For years, accusations have mounted about executive misconduct.*
→ *[people] have accused executives of misconduct.*
- (e) *Sally, who charged that the decision was risky, chose not to attend.*
Note: Do not resolve coreference for *who*. See also (16).
- (f) *A politician must prepare carefully and convey their vision.*
But: *A politician must prepare carefully to convey their vision.*
- (g) *John, still breathing heavily, said he would continue his daily training regimen.*
- (h) *I can't emphasize this enough.*
→ *I emphasized [some previously stated point].*
- (i) *The analyst deconstructs in plain language the remarkable series of events.*
- (j) *The author concludes: "It was caused by a belief that it could never happen."*
Note: the colon is part of the cue span.
- (k) *Romeo: "Is the day so young?"*
- (l) *It was a good plan, which she defended.*
Note: Do not resolve coreference for *which*. See also (15).
- (m) *The plaintiff misrepresented the extent of the damages.*
- (n) *The manager tended to brush aside the needs of his workers.*
- (o) *The two candidates sparred on the issue of how to address rising tuition costs.*
- (p) *Sanders has introduced a new concept in health care.*
- (q) *She would not confirm the allegations.*
See also (13).
- (r) *The markets will rebound according to experts.*
- (s) *This is a minor glitch in the eyes of Jimroy.*
But: *This is a minor glitch in Jimroy's eyes.*
- (t) *There is only one solution, to Sally.*
Note: typically *to* provides insufficient evidence for attribution, but here it represents roughly *in the view of*.
See also (14).
- (u) *The idea of a 15-dollar minimum wage is madness to economic conservatives.*
→ *Economic conservatives don't believe in a 15-dollar minimum wage.*

- (v) *He vehemently denied the allegations of misconduct.*
- (w) *“We aren’t ready to start from scratch,” he said on a call with reporters.*
Note: *on a call* is included in the cue because it describes the manner of the expressive act.
- (x) *There are no known prior cases, a fact he has used as a talking point.*
- (y) *The two candidates sparred on the issue of how to address rising tuition costs.*
- (z) *Alan, though, said he would not attend.*
Note: *though* is not part of cue span.
- (aa) *It gave him renewed enthusiasm to support Sanders’ tax plan.*
- (bb) *The organizer was shocked by the action.*
- (cc) *they mourn a revolt that gave way to an internationalised war.*
- (dd) *Mr. Trump has tried to make an issue out of Mr. Clinton 's sexual history.*

(4) Source did a non-expressive action related to thing. (↑)

- (a) ✗ *I pretended nothing had happened.*
Note: here *pretended* is read as a general action, not an act of expression.
- (b) ✗ *They celebrated it.*
Note: *celebrated* is only an action and does not qualify as a cue.
- (c) ✗ *Most voters stick to one candidate from one election to another.*
Note: this does not attribute an attitude so much as describe a general phenomenon.
- (d) ✗ *The agency is sending emails with that theme.*
Note: here *that theme* doesn’t constitute content. But almost!
- (e) ✗ *He answered the poll.*
Note: here *the poll* doesn’t constitute content.
- (f) ✗ *Sally betrayed Jimroy’s trust.*
Note: here *betrayed* does not constitute a cue. This merely describes an action by *Sally*.
- (g) ✗ *He embraced his new role.*
Note: here *embraced* does not constitute a cue. This merely describes an action by *He*.
- (h) ✗ *The administration ramped up efforts to accept refugees.*
Note: here *ramped up efforts* does not constitute a cue. This merely describes an action by *The administration*.
- (i) ✗ *The administration made a policy announcement.*
Note: here *a policy* does not constitute content.
- (j) ✗ *Trump has tried to stir unease about the Clintons returning to the Whitehouse.*
Note: here *tried to stir unease about* does not constitute a cue. This doesn’t directly attribute an attitude to Trump, but rather describes him as enacting a tactic.

(5) Source knows / believes / contemplates / observes / recalls thing. (↑)

A state of knowledge or contemplation about a thing.

- (a) *The details are what we really know about accounting.*
→ *we know the details about accounting.*
See also (15).
- (b) *Some things we don't understand.*
→ *We understand some things.*
- (c) *Jimroy is trying to understand the emerging trend.*
→ *Jimroy understands the emerging trend.*
- (d) *I don't know why they don't pass the bill.*
- (e) *They wondered why all the advertisers pulled out.*
- (f) *Her fellow cast members didn't know she was only 14.*
- (g) *I think they didn't realize what had happened.*
- (h) *Jimroy sees a trend emerging.*
- (i) *I waited there to see if they would come.*
- (j) *The country can seem like a tourist's paradise.*
→ *to [some people], the country seems like a tourist's paradise.*
- (k) *The problem has been around for a long time, and she realized it was not likely to go away any time soon.*
- (l) *They can exclude anyone they perceive to be a troublemaker.*
- (m) *She remembered the early days of the women's lib movement.*

(6) Source likes / supports / endorses / doubts thing. (↑)

- (a) *Lowell dislikes pickles.*
- (b) *His remorse for his actions was obvious.*
→ *He has remorse for his actions.*
- (c) *The support among Republicans for gay marriage has increased lately.*
→ *Republicans support gay marriage.*
- (d) *The enthusiasm for wine and cheese was more than we expected.*
→ *[the people] were enthusiastic for wine and cheese.*
- (e) *Support for Bernie Sanders grew rapidly.*
→ *[Americans] support Bernie Sanders.*
- (f) *Sally cringed at the thought of riding with Jimroy.*

(g) *Jimroy's commitment to Hillary Clinton is epic.*
→ *Jimroy is committed to Hillary Clinton*

(h) *Sanders has endorsed Clinton.*

(i) *Jimroy doubts it will rain.*

(7) *Source intends to do thing.* (↑)

(a) *Sally hopes to win the cup.*

(b) *Sally plans to win the cup.*

(c) *But the refusal of Jimroy to return was an obstacle.*
→ *Jimroy refused to return.*

Note: Like *declining*, *refusal* is an expression of an intention to not do something, not merely avoiding it.

(8) *Source decreed thing.* (↑)

Cases where a decision amounts to a statement.

(a) *The European Union approved the deal.*

(b) *The treaty died Friday after being rejected by one party.*
→ *One party rejected the treaty.*

(c) *The bill was passed by Congress yesterday.*
→ *Congress passed the bill.*

(d) *The bill would make telecommunications into a public utility.*

Note: normally *would make* is insufficient as a cue, but it should be accepted here because the source is an artifact, making abstract frame (2) the most natural reading. See also (14).

(e) *It's been better since the appointment of the new CEO.*
→ [*The board*] *appointed a new CEO.*

(f) *Reserve personnel were called into duty by the regional deputy.*
→ *The regional deputy called reserve personnel into duty.*

(g) *The curfew was lifted.*
→ [*Officials*] *lifted the curfew.*

(h) *Judge strikes down new law.*
Note: read as an article's headline. Headlines should be annotated just like any sentence.

(i) *Judge Thomson issued an injunction blocking a bill as unconstitutional.*

(j) *The city's ban on smoking in public places will take effect in less than a month.*

(k) ✗ *She filed suit.*
But: ✓ *She filed suit against the company*

(l) *The program would allow foreign nationals to apply for a temporary visa.*

- (m) *He fired him on the spot.*

(9) Source showed thing. (↑)

When a source demonstrates, gives evidence for, or hinting at something. The author might be attributing her own conclusions to the source—that is not for you to decide! Annotate according to the apparent intended reading. When in doubt, accept the phrasing non-critically.

- (a) *The bureau documented the rise in home prices over time.*
- (b) *There were few national polls showing Trump ahead.*
Note: the quantifier *few* is in the source span.
- (c) *The issue divides along race and age, other studies have shown.*
- (d) *The documents show that military spending has increased.*
- (e) *The report shows that the deputy was complicit.*
Note: this is phrased as an attribution, and we accept it as such, even though it may be the author's own conclusion.
- (f) *✗ Based on the report, it is clear that the deputy was complicit.*
Note: this is not phrased as an attribution. Compare to previous item.
- (g) *Records indicate that he had not registered with the bureau.*
- (h) *✗ The statement was full of typos, showing that it had been written hastily.*
Note: that *the statement* was not presenting arguments as to its hasty writing.
- (i) *The documents suggest a widespread conspiracy within senior management.*

(10) Source did not comment. | Source declined to comment. (↑)

- (a) *She declined to comment.*
- (b) *He refused to comment.*
- (c) *She said "No comment."*
- (d) *✗ He did not comment.*

(11) If case, Source might not say thing. (↑)

Conditionals, modals, and negation do not affect annotation!

- (a) *Ask Ted Cruz if he also believes this.*
- (b) *They might think we're on to them.*

- (c) *The analyst wondered whether or not they would get results.*

Note: *whether*, *either*, and *that* should be annotated as content when they are conjunctions that head the content.

(12) *There were statements [by Source] about thing.* (↑)

Passive voice, and implicit sources.

- (a) *There were calls by Democrats for Judge Moore to drop out of the race.*

Note: prepositions linking cue to source (here it is *by*) should not be annotated. However, prepositions linking cue to content (here it is *for*) normally should be annotated, except when separated from a stronger nucleus for the cue (e.g. here *were calls*), due to the single-contiguous-cue rule.

- (b) *It is expected that Congress will vote on the bill tomorrow.*

→ *[Political analysts] expect that Congress will vote on the bill tomorrow.*

Note: Empty subject *It* merely satisfies the requirement a subject and should not to be annotated.

- (c) *The poem is known as “Ode to Ye Olde.”*

→ *[People] know the poem as “Ode to Ye Olde.”*

See also (17).

- (d) *There’s a lot of talk about intentions recently.*

Note: Empty subject *There* merely satisfies the requirement a subject and should not to be annotated.

- (e) *It is expected that markets will rise.*

- (f) *She is known as the rainmaker.*

Note: Unlike *There* and *It*, the subject *She* is not empty, and should be annotated as part of the content.

- (g) *It is known that there were attempts prior to the successful attack.*

- (h) *Mr. Clinton, 69, looked smaller and his voice seemed weaker than in past campaigns.*

- (i) *It seems that the market will drop.*

(13) *Source stated it.* | *Source made Statement.* (↑)

How to handle seemingly empty content: distinguish between references to the artifact / act of expression and references to the content.

- (a) *She denied it.*

- (b) ✗ *She wrote a report.*

But: ✓ *She wrote a report about the national cost of smoking.*

- (c) ✗ *They made an allegation.*

But: ✓ *They made an allegation of professional misconduct.*

Note: here *an allegation* refers to an artefact of expression, not content; however see next item.

- (d) *They denied the allegation.*

Note: though seemingly inconsistent with the previous item, here, *the allegation* is a metonymy for the content of the allegation.

- (e) ✗ *He said three words.*

Note: *three words* is a description of the artifact bearing content, not the content itself.

- (f) *He described the event.*

- (g) *It was a good plan, which she defended.*
Note: Do not resolve coreference for *which*. See also (15).
- (h) *They talked politics yesterday*
 → *They talked about politics.*
- (i) ✗ *The law was authored by speaker Ryan.*
Note: here *the law* is the artifact of expression, and does not constitute the content per se.
- (j) *They came before it was announced.*
 → *They came before [people] announced it.*

(14) *Thing in source.* | *Source makes thing.* (↑)

Cues that that are normally not attributive can sometimes gain that status. This happens often with artifacts (bills, reports, surveys, polls), where actions (like *in*, *make*, *do*, etc) are clearly attributive. It also happens with sentient sources and the preposition *to*—see item (a).

- (a) *There is only one solution, to Sally.*
Note: Here *to* is roughly equivalent to *in the view of*.
- (b) *Sally is ahead in national polls.*
Note: Here *in* is used to describe what *polls* indicate.
- (c) ✗ *Trump is ahead in the race.*
Note: this differs from the item above—*the race* doesn't indicate that trump is ahead, it is merely the state of affairs that he is ahead.
- (d) ✗ *The documents were stored in an encrypted file system.*
Note: obviously not attribution—in is being used in the common physical sense of containment.
- (e) *The bill will make it legal for gay couples to get married.*
Note: though phrased like an action, this is indicating the content of the bill.
- (f) ✗ *The bill will make it hard for republicans to argue for fiscal conservatism.*
Note: here *will make* is meant in a strictly causal sense.
- (g) *This legislation seeks to limit visas for foreign students.*
Note: this should be read as indicating the content, not the intention, of the bill (though either reading leads to the same annotation).
- (h) ✗ *The accountant will review the company's finances before submitting a report.*
But: *The accountant plans to review the company's finances before submitting a report.*
- (i) ✗ *The defendant will appear in court next month.*

(15) *Thing, which source said [about other thing].* (↑)

Attribution in relative clause: do not resolve coreference.

- (a) *He was the man who the commentator accused of breaking the rules.*
Note: do not annotate *the man* even though it is coreferent with *who*.
- (b) *The man is who the commentator accused of breaking the rules.*
Note: do not annotate *the man* even though it is coreferent with *who*.

- (c) *This is the new watch, **which they have promoted**.*
Note: do not annotate *the new watch* even though it is coreferent with *which*.
- (d) *The new watch is **what they have promoted**.*
Note: do not annotate *the new watch* even though it is coreferent with *which*.
- (e) *This was **all they talked about**.*
Note: do not annotate *This* even though it is coreferent with *all*.
- (f) *He is surrounded by surrogates **who are expected to become increasingly aggressive**.*
- (g) *There **are expectations for rain tomorrow**.*
Note: do not annotate empty subject *There*, which merely satisfies the grammatical requirement for a subject.
- (h) *It **is expected to rain tomorrow**.*
Note: do not annotate empty subject *It*, which merely satisfies the grammatical requirement for a subject.

(16) *Source, **who said thing**.* (↑)

Attribution in relative clause: do not resolve coreference.

- (a) *The mysterious figure, **who would oppose him politically**, is gaining traction.*
- (b) *She was the mysterious figure, **who would oppose him politically**.*
- (c) *Bay Financial, **which said it may be forced to file under Chapter 11**.*

(17) *Thing is called “Name.”* (↑)

- (a) *It’s a phenomenon **called “magnetism.”***
 → [*people*] *call the phenomenon “magnetism.”*
- (b) *He wrote a poem **called “A cybernetic dream.”***
- (c) *The poem **named “Jabberwocky”** is a fun read.*
- (d) *✗ Later he appeared on “**Meet the Press**.”*
Note: here the quotation marks aren’t being used for attribution.

(18) *Source **says thing**—related non-attributed thing.* (↑)

- (a) *Schutte **said she was fortunate to be in a family interested in sciences—her three older brothers all studied science fields**.*
Note: although *Schutte* probably also said that she has three brothers in science fields, the author is not actually attributing it.
- (b) *Lamsa **noted that the wall came down easily, indicating it meant as a statement**.*
Note: Include the second clause, since the author also seems to attribute it to the source.
But: *Lamsa **noted that the wall came down easily, which indicates it meant as a statement**.*
But: *Lamsa **noted that the wall came down easily, which indicated it meant as a statement**.*

- (c) **He blames the Syrian government but also the international community for the transformation of the revolt into a war that has killed 270,000 people.**

Note: surely the author does not intend to indicate that the source gave the tally of deaths.