How Do LLMs Ask Questions? A Pragmatic Comparison with Human Question-Asking

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Abstract

Question asking is a key linguistic and cognitive skill that supports collaboration and diverse social actions. However, large language models (LLMs) often underuse questions in their outputs, leading to misunderstandings or unproductive outputs. Toward bridging this gap, we analyze human questions from a real-world social setting—Reddit—and compare them to LLM-generated questions. We use a pragmatics-based taxonomy of social actions to examine six open- and closed-source model families. Our analysis shows that LLMs fall short of capturing the diversity and balance of human question-asking, with significant differences in question type distributions. Prompting often introduces prompt-specific biases that diverge from human patterns, while the effects of instruction-tuning are model-dependent and inconsistent across social functions. These findings highlight the need for more fine-grained approaches to align LLMs with human-like questioning behavior.

1 Introduction

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Question asking is a hallmark of human intelligence, reflecting critical thinking [Albergaria-Almeida, 15 2011], curiosity [Jirout and Klahr, 2012], and creativity [Acar et al., 2023]. It also underpins 16 collaboration [Sperber et al., 2010] and serves diverse social functions [Stivers et al., 2010]. Yet large 17 language models (LLMs) rarely ask questions in their outputs [Shaikh et al., 2024], even as they 18 become more agentic and integrated into collaborative workflows [Wang et al., 2020]. Prior work has 19 linked this limitation to preference-tuning data, focusing mainly on clarification questions [Shaikh 20 21 et al., 2024, Zhang et al., 2024, Andukuri et al., 2024] or on a question's utility for producing answers [Zhang et al., 2024]. While clarification is valuable for problem-solving, human question asking 22 is far more dynamic—seeking information, suggesting alternatives, and challenging assumptions [Stivers et al., 2010]. This highlights a gap in understanding the broader communicative, creative, 24 and curiosity-driven functions of questions. 25

To address this gap, we analyze and interpret question-asking behavior in both humans and language models (LMs). Specifically, we investigate: (1) *How do humans and LMs differ in their use of question types?* and (2) *How do current alignment methods affect the question-asking behavior of LMs, and do they improve alignment with human patterns?* To answer these questions, we construct a dataset from a Reddit community, r/NoStupidQuestions. Using a question type taxonomy based on social actions [Stivers and Enfield, 2010], we categorize the questions posed by both humans and LMs in response to these posts. We then investigate whether aligning to enhance question asking leads to human-like question asking behavior.

Our findings reveal that LMs fail to replicate the diversity and balance of human question-asking behavior. Their question distributions differ significantly from those of humans, often focusing disproportionately on rhetorical questions and information requests. Prompting techniques help

Table 1: Question types along with their definitions and corresponding examples

Social Action	Definition	Example
Request for information	Genuine questions seeking information.	"Are you busy tonight?"
Other initiation of repair	Includes open-class repair initiators and partial repeats.	"Huh?" / "He went where?"
Request for confirmation	Asserts a proposition for confirmation.	"So you're coming tomorrow night."
Assessment	Evaluations formatted to seek agreement.	"Isn't it beautiful out today?"
Suggestion/Offer/Request	Suggests, proposes, offers, or requests something.	"Did you want some?"
Rhetorical question	May seek a response but not an answer; often expresses opinion.	"Everything comes out in the wash, doesn't it?"
Outloud	Directed to no one in particular, often quieter, not designed to secure a response.	"Now where are my keys."
Other	Does not fit other categories; action specified separately.	Case-specific action

elicit more questions but frequently introduce prompt-specific biases—such as overproducing certain question types or relying on repetitive lexical patterns—ultimately failing to align with the nuanced characteristics of human questioning. We also observe that the effect of instruction-tuning is highly model-dependent and varies across social functions of questions. Instruction-tuning does not consistently improve human alignment, underscoring the need for a more fine-grained analysis of its impact on different question types.

3 2 Related Works

Previous studies have identified question-asking as a key deficiency in LLMs [Bai et al., 2024, Shaikh et al., 2024], with most prior work focusing on clarification questions by constructing 45 benchmarks [Li et al., 2025a, Aliannejadi et al., 2021, Guo et al., 2021] and proposing methods 46 for improvement [Kobalczyk et al., 2025, Zhang et al., 2025, Testoni and Fernández, 2024, Zhang 47 and Choi, 2025]. Beyond clarification, other studies have explored question-asking as a tool for 48 downstream applications such as preference elicitation [Li et al., 2025b, Andukuri et al., 2024], 49 information-seeking [Meng et al., 2023], and medical reasoning [Li et al., 2025c]. However, Shaikh 50 et al. [2024] show that prompting interventions, while increasing grounding acts like clarification 51 and follow-up questions, often have minimal or negative effects on alignment with human behavior; 52 replicating Zephyr's [Tunstall et al., 2023] training further revealed that contemporary preference 53 datasets reduce question frequency due to both the scarcity of questions in training data and annotator 54 dispreference. In this work, we extend the focus beyond clarification and task-specific settings by 55 analyzing three model families at different training stages and investigating LMs' question-asking 56 abilities through a comprehensive taxonomy of human question-asking [Stivers and Enfield, 2010], 57 highlighting the diverse social functions questions serve in natural communication. 58

59 3 Methods

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Question types taxonomy By adopting a coding scheme developed for human questions in natural conversation [Stivers and Enfield, 2010], we aim to investigate whether LMs can generate the diverse range of questions humans ask for dynamic purposes. This extends the scope beyond previously researched LLM questioning abilities, such as clarification or follow-up questions. In our analysis, we focus on the social action dimension, as it encompasses diverse social goals of questions, especially fitting in general question asking setting reflected in our current dataset. The taxonomy classifies the social actions performed by a question into seven categories as specified in Table 1. If a question does not fit any of the predefined social action types, it is labeled as "Other/" followed by a description of the specific social action being performed.

Automatic question type annotation and aggregation We automatically label questions from both humans and LLMs using three-shot prompting with OpenAI's o3 model, which extracts questions from text and classifies them according to Stivers and Enfield [2010]. The full prompt is provided in Appendix B. To evaluate annotation quality, we compare model labels with human annotations on 136 questions¹, obtaining a Cohen's Kappa of 0.78 and a macro-averaged F1 of 0.79, indicating substantial agreement. Additionally, we define *question proportion* as the average query-level proportion of each question type, computed by assigning each question in a post a weight of 1/n when n questions

¹4 from each of 29 model–prompt pairs plus 20 human-generated

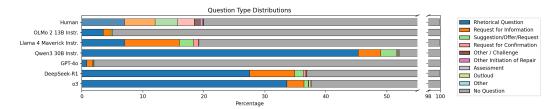


Figure 1: Question type distributions of humans and LLMs. LLMs show reduced diversity and skewed distributions compared to humans. Chi-square tests reveal significant differences in five of six models ($p_{adj} < 0.05$), except OLMo-2-13B-Instruct ($p_{adj} = 0.18$).

are present. This metric is used to compare humans and LLMs, as well as among LLM variants at different training stages.

Dataset We collect 3,564 posts and 38,205 comments from the r/NoStupidQuestions subreddit² in 2024. We include all 1,782 posts with multiple question comments and sample an equal number without question comments to balance the dataset. Comments with question marks (excluding those with URLs) are identified as questions. All comments on the selected posts are included, except those removed by administrators. This setup ensures a sufficient and unbiased sample of human-generated questions for comparison with LLMs.

LLM question generation We analyze questions generated by LLMs in response to Reddit posts in our test set. The models include OLMo-2-13B (Base, SFT, and Instruct), LLaMA-4-Maverick-17B-128E (Pretrained and Instruct), Qwen-3-30B (Base, A3B, and Instruct), GPT-4o-2024-08-06, DeepSeek-R1-0528, and o3-2025-04-16.³ We use four prompt variations: (1) Naive, which provides only the Reddit post's title and body; (2) Question, which encourages asking questions when needed; (3) Taxonomy, which includes our question type taxonomy for guidance; and (4) Imitate, which instructs the models to emulate human Reddit users. Full prompt details are in Appendix A.

4 Results

LLMs fail to match human question diversity and distribution. Figure 1 compares question type distributions of humans and instruction-tuned LMs using the naive prompt (Appendix 4 shows all models). LMs either ask far fewer questions than humans (e.g., OLMo-2-13B-Instruct, GPT-4o) or disproportionately favor rhetorical questions and requests for information (e.g., LLaMA-4-Maverick, Qwen-3-30B, Deepseek-R1, O3). Across all models, Suggestions/Offers/Requests, Requests for Confirmation, Other/Initiation of Repair, and especially Other/Challenge questions (<0.04%) are markedly underproduced. Chi-square tests show significant differences between humans and five of six LMs ($p_{\rm adj} < 0.05$), with OLMo-2-13B-Instruct as the exception ($p_{\rm adj} = 0.18$) (Appendix D). Pairwise comparisons among the six LMs reveal no significant differences for 9 of 15 pairs⁴. Overall, LMs fail to align with human question-asking behavior in both diversity and distribution, while exhibiting broadly similar patterns across models.

Prompting is not sufficient for aligning LLM question asking behavior. We examine the effects of three prompt variations—Question, Imitate, and Taxonomy—on aligning LLM question types toward human-like patterns. **Quantitative analysis** reveals statistically significant differences between human and model question type distributions across all prompts ($p_{\rm adj} < 0.01$, Chi-square tests). As expected, all three prompts increase Requests for Information, Suggestions/Offers/Requests, and Requests for Confirmation—categories typically underused by LMs—across most models (Figures 2a), 5a, 5b). However, the Question prompt disproportionately boosts information requests,

²https://www.reddit.com/r/NoStupidQuestions/

³We exclude other baseline methods designed to improve LLM question-asking capabilities, as they are typically trained for specific tasks (e.g., clarification or preference elicitation) and do not generate natural responses for our test set.

⁴Significant differences appear for OLMo–Qwen, LLaMA–Qwen, LLaMA–O3, Qwen–R1, Qwen–O3, and R1–O3 ($p_{\rm adj} < 0.01$).

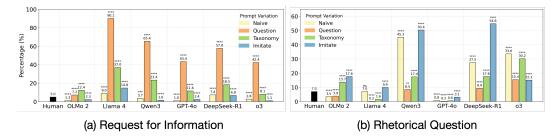


Figure 2: Question type distributions across prompting conditions. LLMs exhibit prompt-induced biases and fail to match human question patterns. Significance levels from two-sided paired t-tests with Benjamini–Hochberg correction are shown above each bar.

exceeding human levels by up to 85.1 percentage points, while the Imitate prompt inflates rhetorical and assessment questions beyond human levels (Figure 2b). None of the prompts consistently increase Other/Challenge questions, which remain below human proportions (Figure 5d).

In our **qualitative analysis** of sampled questions, we find that human Request for Information questions are typically brief and standalone, whereas LMs often embed such questions within or at the end of longer responses. These questions frequently follow templated patterns—such as offering to elaborate on related topics (e.g., "Would you like to know more about...?"), soliciting the user's opinion (e.g., "What do you think?"), or seeking validation (e.g., "Do any of these perspectives resonate with you?"). Model-generated rhetorical questions differ in purpose from human ones. Both humans and LMs use rhetorical questions for hypophora (e.g., "Am I the audience for his films? Definitely not."), but humans more often assert opinions (e.g., "Does it even matter?"), whereas LMs rarely do so under the Naive, Question, or Taxonomy prompts. Instead, LMs tend to produce reflection-oriented prompts (e.g., "Ask yourself: What is the evidence for these thoughts?"). Under the Imitate prompt, however, models becom highly biased toward assertions (e.g., "Who wouldn't want to be able to do that?"). Assessment questions also diverge: LMs frequently rely on fixed forms (e.g., "..., right?", "..., huh?"), while humans use more varied structures (e.g., "..., isn't it?", "Aren't they ...?", "..., ay?"). Overall, prompting techniques induce biases that hinder LMs from aligning with the balanced distribution and nuanced characteristics of human questions.

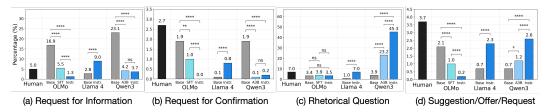


Figure 3: Question type proportions across LLM training stages. The effects of instruction-tuning are family-specific and vary by social action type. Statistical significance from two-sided paired t-tests (Benjamini–Hochberg corrected) is shown above each bar.

The impact of instruction tuning is specific to model and communicative purpose. We investigate the effect of instruction tuning across three LLM families—OLMo-2-13B, LLaMA-4-Maverick, and Qwen-3-30B—with different training stages available for generation. Patterns vary by question type: for epistemic questions (Information Requests, Confirmations), OLMo-2-13B and Qwen-3-30B base models ask more than their SFT or instruction-tuned counterparts (p < 0.01), while LLaMA-4-Maverick asks more in the instruct variant ($p < 10^{-4}$) (Figure 3a,b). For Rhetorical and Suggestion/Offer/Request questions, instruction-tuned LLaMA and Qwen models produce more than their base versions ($p < 10^{-4}$), whereas OLMo-2-13B-Base exceeds its tuned variants only for Suggestion/Offer/Requests ($p < 10^{-4}$) and shows no significant differences in rhetorical questions (Figure 3c,d). These results indicate that instruction tuning shapes question-asking behavior in family-and function-specific ways.

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222 A Prompts for LLM generations

23 A.1 Question Prompt

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User Query: {title} {selftext}

Converse with the user to deliver an effective response to their query. Feel free to ask any questions if necessary.
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5 A.2 Taxonomy Prompt

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User Query: {title}
{selftext}
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Respond to the user's query. If needed, consider using an appropriate question from the taxonomy below to guide the conversation:

- Request for Information: Questions genuinely seeking information, with no other primary action apparent.
- Other Initiation of Repair: Questions including open class repair initiators as well as partial repeats.
- Request for Confirmation: Questions asserting a proposition and seeking confirmation.
- Assessment: Evaluations that were formatted to seek agreement.
- Suggestion/Offer/Request: Questions proposing, suggesting, offering, or explicitly requesting something.
- Rhetorical Question: Questions that assert opinions or points, not seeking genuine answers.
- Outloud: Questions not directed toward anyone, without intent to receive a response
- Other: Questions not fitting clearly into any category above. (e.g., Challenge, Pre-invitation, etc.).

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228 A.3 Imitate Prompt

You are a Reddit user browsing r/NoStupidQuestions.

Post Title: {title}
Post Body: {selftext}

Write a natural and authentic Reddit comment responding to this post.

- Use casual and informal language, like a normal Redditor.
- Avoid sounding like a chatbot or being overly formal.

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B Automatic annotation prompt

The full prompt used for automatic annotation is provided below.

You are provided with multiple Reddit post and comment pairs. Each comment $\ \hookrightarrow \$ contains at least one question.

Your task is to process each pair by performing the following steps:

- 1. Extract all questions asked to the poster from the comments that meet
- \hookrightarrow these criteria:
 - Include questions if they meet any of the following criteria:
 - Are formal questions (grammatically marked as interrogative).
 - Are functional questions (aiming to elicit information, confirmation,
 - \rightarrow or agreement), even if not formally interrogative.
 - Are newsmarks (e.g., "Really?", "Is it?", "Yeah?") as these typically \hookrightarrow seek confirmation.
 - Exclude questions if they meet any of the following criteria:
 - Solely seek acknowledgment during storytelling (e.g., "And it was a
 - \hookrightarrow Weight Watchers recipe right?").
 - Appear only as reported speech (e.g., "Then he said, 'Aren't you gonna \hookrightarrow come over?'").
- 2. Using the full context (both the original post and the comment), assign
- \hookrightarrow each extracted question according to three criteria below. If a single
- $\,\hookrightarrow\,$ comment includes multiple questions, categorize each one individually
- \hookrightarrow into a single category.

```
Social Action:
- Request for Information - Questions genuinely seeking information, with no

→ other primary action apparent. (Ambiguous cases like "Are you busy

\hookrightarrow tonight?"-a potential pre-invitation-should be coded as "Other /
→ Pre-invitation".)
- Other Initiation of Repair - Questions including open-class repair
→ initiators ("Huh?" or "What?") as well as partial repeats ("He went
\hookrightarrow where?"). If it seemed that the repair was more a challenge than an

→ initiation of repair, "Other / Challenge" should be coded.

- Request for Confirmation - Questions asserting a proposition and seeking
\hookrightarrow confirmation (e.g., "So you're coming tomorrow night.").
- Assessment - Evaluations that are formatted to seek agreement such as
→ "Isn't it beautiful out today?" or "She's such a pretty girl, isn't she?"
- Suggestion/Offer/Request - Questions proposing, suggesting, offering, or
\rightarrow explicitly requesting something (e.g., "Did you want some cereal?").
- Rhetorical Question - Questions that assert opinions or points, not seeking

→ genuine answers (e.g., "Everything comes out in the wash, doesn't it?").

- Outloud - Questions not directed toward anyone, without intent to receive a
\,\hookrightarrow\, response (e.g., "Now where are my keys?" while looking in a bag).
- Other / [Specific Social Action] - Questions not fitting clearly into any
\hookrightarrow category above. Specify explicitly the social action performed after a
\hookrightarrow slash ("/") (e.g., "Other / Challenge," "Other / Pre-invitation," etc.).
Example output:
    "post_title": "Why do some people eat food directly from the container

→ instead of using a plate?",

    "post_body": "I've noticed that certain individuals, when eating foods
    \hookrightarrow like ice cream, chips, or even leftovers, will consume it straight
    \,\hookrightarrow\, from the container rather than transferring it to a plate or bowl. Is
    \,\hookrightarrow\, there a specific reason for this behavior, or is it simply a matter
    \hookrightarrow of convenience or personal preference?",
    "comment": "Why dirty a plate when you can just eat straight from the
    \,\hookrightarrow\, container? Less dishes to wash, and sometimes it just feels more
    \,\hookrightarrow\, satisfying to dig into a tub of ice cream with a spoon. Plus, if
    \hookrightarrow you're just snacking or eating alone, who cares, right?",
    "extracted_questions": ["Why dirty a plate when you can just eat straight
    → from the container?", "Plus, if you're just snacking or eating alone,

→ who cares, right?"],

    "logical_semantic_structure": ["Polar Question", "Polar Question"],
    "through_produced_multi_question": "Yes",
    "social_action": ["Rhetorical Question", "Rhetorical Question"]
    "post_title": "Should I get pizza or wingstop today? ",
    "post_body": "I can't decide. I don't feel like leaving so I could

→ doordash wingstop or I could get my ass up and go pick up a pizza

    \hookrightarrow since there is a domino's close by ",
    "comment": "Doesn't domino's have wings too? You can get both there.",
    "extracted_questions": ["Doesn't domino's have wings too?"],
    "logical_semantic_structure": ["Polar Question"],
    "through_produced_multi_question": "No",
    "social_action": ["Request for Confirmation"]
  },
    "post_title": "What does cilantro even taste like to normal people?",
    "post_body": "I'm fairly certain I have that Cilantro-Soap gene you'll
    \hookrightarrow vile. But not ONCE have I seen a normal person describe the taste of
    \hookrightarrow What does it taste similar to?",
```

```
"comment": "I hate when it overpowers the dish.",
     "extracted_questions": [],
     "logical_semantic_structure": [],
     "through_produced_multi_question": "N/A",
     "social_action": []
  }
1
Return the following JSON list, with the empty fields filled in for each JSON
\hookrightarrow object.
    "id": "{id}",
"post_title": "{post_title}",
     "post_body": "{post_body}",
    "comment": "{comment}",
    "extracted_questions":
     "logical_semantic_structure":
     "through_produced_multi_question":
     "social_action":
  },
    "id": "{id}",
    "post_title": "{post_title}",
"post_body": "{post_body}",
"comment": "{comment}",
    "extracted_questions":
     "logical_semantic_structure":
     "through_produced_multi_question":
     "social_action":
  }]
```

C Model and Human Generations Table

Field	Content	
Post Title	Why do some people eat food directly from the container instead of using a plate?	
Post Body	I've noticed that certain individuals, when eating foods like ice cream, chips, or even leftovers, will consume it straight from the container rather than transferring it to a plate or bowl. Is there a specific reason for this behavior, or is it simply a matter of convenience or personal preference?	

GPT-40

There are several reasons why people might choose to eat directly from the container instead of using a plate or bowl. Here are a few possibilities:

- 1. **Convenience**: Eating directly from the container can save time and effort. It eliminates the need to wash extra dishes, which can be appealing, especially if someone is in a hurry or doesn't want to deal with cleanup.
- 2. **Portion Control**: Some people might find it easier to control their portions by eating directly from the container. For example, with ice cream, they might feel they can stop eating when they feel satisfied rather than finishing a pre-scooped bowl.
- 3. **Casual Setting**: In informal or relaxed settings, people might feel more comfortable eating directly from the container. It can feel more laid-back and less formal than using a plate.
- 4. **Habit or Preference**: For some, it might simply be a habit or personal preference. They might enjoy the experience of eating directly from the container or find it more satisfying.
- 5. **Social Influence**: If someone sees others around them eating directly from containers, they might be more inclined to do the same. It can be a social norm in certain groups or situations.

Do any of these reasons resonate with what you've observed, or is there a specific context you're curious about?

OLMO-instruct

Eating directly from the container seems to be a blend of convenience, habit, and individual preference. Here are a few reasons why some might opt for this method:

- 1. **Convenience:** Sometimes, the thought of washing extra dishes or taking the time to transfer food into another container just isn't appealing. Especially if someone is eating quickly or on-the-go, opting for the container is a time-saving choice.
- 2. **Portion Control:** For some, it might be a way to monitor how much they are eating, especially if the container has clear serving sizes marked on it.
- 3. **Taste Preference:** There's a belief that eating directly from the container can change the taste experience slightly due to the container's material or the way it maintains temperature (e.g., ice cream from a tub).
- 4. **Easier Access:** Containers, especially those designed for takeout or single servings, are often more portable and provide direct access to the food, which can be appealing.
- 5. **Mindless Eating:** This behavior can also be a part of mindless eating, where the individual is not fully conscious of how much they are eating because they are not seeing the food portioned out.
- 6. **Personal Habit:** For some, it could simply be a long-established habit that they grew up with or formed over time.

It's important to note that occasionally eating from containers is generally harmless. However, making it a frequent habit might lead to overeating without recognizing it, as there's less visual cue to how much has been consumed. Furthermore, it's critical to wash containers properly to prevent the spread of germs and bacteria.

So, while eating from the container is often a matter of convenience and personal preference, it's also worth considering how it aligns with one's eating habits and health goals. Would you like to delve further into any aspect of this topic?

OLMO

Assistant: This is an interesting observation! While the answer may vary from person to person, here are a few possible reasons why some people eat food directly from the container:

- 1. **Convenience**: It might be quicker and more convenient to eat straight from the container, especially if they are in a hurry or multitasking.
- 2. **Portion Control**: Eating directly from a container can help with portion control, particularly for foods that are often consumed in small servings, like nuts or candies.
- 3. **Sanitation**: Some people might believe that eating directly from the container is cleaner or less prone to contamination than using a plate or bowl.
- 4. **Personal Preference**: Ultimately, it might just be a personal preference or habit for some individuals. They might find it enjoyable or comfortable to eat straight from the container.

Do any of these reasons resonate with you, or are there other factors that you think might contribute to this behavior?

DeepSeek-R1

That's a great observation! Eating straight from the container is surprisingly common, and there are several reasons why people do it, often a mix of practicality and psychology:

- 1. Convenience & Laziness (The Big One): Less Cleanup: This is probably the top reason. Using a plate or bowl means washing an extra dish. Grabbing the tub, bag, or box and a spoon/fork means only cleaning that one utensil (or sometimes none, if it's finger food like chips). Speed: It's simply faster. No need to transfer food, especially when you just want a quick snack.
- 2. **Portion Control (or Lack Thereof):** "Just a Taste" Mentality: People often intend to have just a little bit. Pouring chips into a bowl feels like committing to a larger portion. Eating a few straight from the bag feels more contained (even if it often leads to eating more!). **Avoiding Over-Serving:** Conversely, for some *trying* to control portions, eating directly *can* be a (sometimes flawed) strategy. "I'll just have two spoonfuls of ice cream from the tub" avoids the temptation of scooping a huge bowl. (Though it often backfires!).
- 3. **Sensory & Experiential Factors: Texture/Temperature:** Ice cream straight from the tub can feel denser, colder, and more satisfying to some than when slightly melted in a bowl. Chips might stay crisper in the bag. **Mindless Eating:** Eating from a large container can facilitate zoning out while watching TV, reading, or working. The food is just *there*, requiring minimal attention. **Comfort/Indulgence:** There's a certain rebellious or comforting feeling about eating directly from the source, especially with treats like ice cream. It feels less formal, more indulgent.
- 4. **Context & Situation: Alone vs. With Others:** This behavior is *far* more common when eating alone. Doing it in front of others can be seen as rude or unhygienic (especially with shared containers). **Fatigue/Late Night:** When tired (e.g., late-night snack), the effort of getting a plate feels like too much. "**My House, My Rules":** When people are in their own private space, social norms relax. They feel free to do what's easiest/most comfortable for them.
- 5. **Habit & Upbringing:** For some, it's simply how they've always done it or how they saw family members do it. It becomes the default.

To make my answer even more relevant to you:

Is there a specific food or situation where you've noticed this most? (e.g., Is it always ice cream? Only when people are alone? With shared snacks?) Are you asking out of curiosity, or is it something you do yourself and wonder about? (Understanding your perspective helps tailor the answer!)

In essence: While convenience and laziness are major drivers, it's often layered with psychological factors like perceived portion control, sensory preference, and the comfort of informality, especially in private settings. It's usually not *just* one reason, but a combination that makes the path of least resistance (and fewest dishes) appealing!

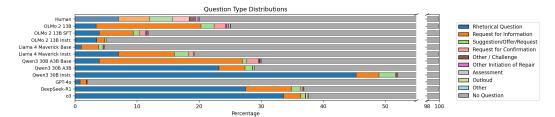


Figure 4: Distributions of question types produced by all LLMs under the naive prompt and the humans. Compared to humans, LLMs exhibit limited diversity and skewed distributions, often overproducing Rhetorical and Request for Information questions while underproducing suggestions, confirmations, and challenges.

Human

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Perhaps an equally valid question is the inverse. Why do certain individuals transfer their food to a plate or a bowl before eating it? Is there a specific reason for this behavior, or is it simply a matter of convenience or personal preference?

D Chi-squared test details

We compare each model's question-type distribution with the human's using a two-stage cluster-237

bootstrap Chi-squared test. We retain the six question types that reach > 1% frequency in any system— 238

Request for Information, Request for Confirmation, Rhetorical Question, Suggestion/Offer/Request, 239

Assessment, and Other / Challenge. Each of 10000 bootstrap replicates resamples the 3564 posts 240

in the test-set with replacement; within every sampled post, we draw one response per system and 241 tally the six labels. The resulting Monte-Carlo p-values are FDR-corrected (Benjamini-Hochberg).

242

Cluster resampling controls within-post dependence among the responses.

Question Type Distributions Across All Models \mathbf{E} 244

In Figure 4, we present the full distributions of question types generated by all evaluated LLMs under 245

the naive prompt and the humans. This expanded view reinforces our earlier findings that LLMs 246

exhibit less diverse and imbalanced question-asking behavior compared to humans.

Additional question type comparisons across prompting conditions

249 Figure 5 presents additional comparisons of question type distributions between humans and the LLMs

across the various prompting techniques. These comparisons focus on Suggestion/Offer/Request, 250

Request for Confirmation, Assessment, and Other/Challenge questions, which were not covered in 251

the main figure. 252

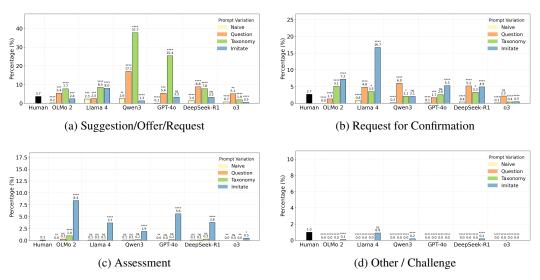


Figure 5: Additional comparisons of question type distributions between humans and LLMs across different prompting conditions. Statistical significance of differences between human and model outputs is indicated above each bar, based on two-sided paired t-tests with Benjamini–Hochberg correction.