

PAIR: Planning and Iterative Refinement in Pre-trained Transformers for Long Text Generation (Supplementary Material)

Xinyu Hua

Khoury College of Computer Sciences
Northeastern University
Boston, MA
hua.x@northeastern.edu

Lu Wang

Computer Science and Engineering
University of Michigan
Ann Arbor, MI
wangluxy@umich.edu

A Human Evaluation

As described in § 5.2 of the paper, we carry out two human evaluation studies. In the first study, the goal is to assess the output quality of three aspects. The detailed evaluation guideline and examples are listed in Figure 1 and Figure 2.

B Sample Output

From Figure 3 to Figure 8 we show more sample outputs, together with their human-written references.

This study aims to evaluate three text generation systems for counter-argument generation resembling the reddit ChangeMyView style (CMV). In total, 53 sets of samples will be presented. Each entry starts with a statement that has a stance over a certain topic. Machine generated responses will be listed under the title in random orders.

Please first read the title and each of the three system outputs. Then rate each output over the following aspects on a likert scale (1-worst, 5-best). At the end of each entry, please also indicate the overall ranking of the four systems:

- **Fluency:** whether the output is free of grammar errors and easy to read
 - 1. the output contains multiple major grammar errors that significantly reduce readability, e.g., *“It suggesting looks you that eu perhaps a higher tax rate.”*
 - 3. the output contains at most one major grammar error, or up to three minor grammar errors, e.g., *“Gender make complete senses, but not so with you. All sex is is the difference between masculinity and femininity.”*
 - 5. the output is fluent and free of any grammar errors, e.g., *“Perhaps the name “Aesop” is a reference to the religious philosophy of this sect, which channels Ramtha, as a spokesman for the Catholic Church.”*
- **Coherence:** whether the information transition is natural and well-structured
 - 1. the output either has obvious self-contradiction or at least two major incoherent sections, e.g., *“The EU is the way forward. Its not that different from other empires that didn’t work out at the end.”*
 - 3. the output contains at most one major incoherent section or up to three minor incoherent problems, e.g., *“It may be that you have a ticket to die and you need to take it. That’s why we are soldiers.”*
 - 5. the information transition is natural and the overall message is clearly delivered, e.g., *“The primary advantage a EU military has is the authority of the EU institutions, without which individual states cannot have coalitions on this level.”*
- **Relevance:** whether the response is on topic and has a clear opposing stance
Topic: *We shouldn’t raise the minimum wage to \$15 an hour.*
 - 1. the output is generic or completely irrelevant, e.g., *“I don’t think it is untrue to believe in such an assumption.”*
 - 3. the output mentions at least one major overlapping concepts to the topic, e.g., *“Arguments for raising minimum wage should be the same as arguments for universal basic income. It will result in higher prices eventually.”*
 - 5. the output is on topic and has a clear opposing stance, e.g., *“The minimum wage was designed specifically for someone to be able to pay rent, utilities, and food. However, this standard is not met in most states.”*

Figure 1: Evaluation guidelines on the first human study and representative examples on rating scales.

This study aims to compare some intervention strategies over the same model. The same 53 entries from study 1 will be evaluated. Additionally, 53 entries from a different domain (opinion) will be presented. For each entry, please read the title and three samples, then determine an overall rank, from best to the worst, e.g., “B > A > C” to indicate B is better than A, and A is better than C. We allow ties among samples if such order is difficult to decide, in which case please indicate with a “-” symbol, such as “B - A > C”.

When evaluating the examples, please consider fluency, coherence, and semantic correctness (e.g., whether the sample contradicts common sense, or misuses subjective/objective for certain predicates). An example is shown below:

● **Entry:** The Dog in My Life (and Maybe a Cat, Too)

- A: *Thank you to John Tierney shedding light on the many health problems endured by adopted cats and dogs. I have my share of those problems and have recently adopted a purebred Himalayan cat. His concave face and abdomen makes breathing difficult, and none of the hairs on his ears are watted back, and resulting in irritation. He also has fur mats like cotton candy and requires constant clipping to keep him from being dirty and smeared. I told that some Himalayan owners consider him a "lion's skin." I am happy to say he is not, though I don't know why. I did not need anesthesia to remove all the fur from his face, tail and paws. Clearly, my adopted cat is healthy and is a lot of fun to be around. I am not afraid of him being around the house alone.*
- B: *I thank Maureen Dowd for shedding light on the many health problems of Himalayans. I not, however, read the article about those problems when she first adopted a purebred Himalayan cat. Her concave face, which makes breathing difficult, and none of the hairs around her eyes are allowed to stand up, resulting in irritation and scratching. Her fur mats like cotton candy and requires constant clipping (even on the off-duty days). I have been told that some Himalayan owners think that their pet would be a "lion" or a "elephant," but I can't tell her that. The treatment, which I am told, is anesthesia and applies to the fur on her face, tail and paws. Like my first adopted cat, I was told if I didn't to stand in front of the electric chair. Instead, let her meow Iona.*
- C: *Thank you to John Tierney shedding light on the many health problems facing dogs and cats in America. I can add one of my those problems: I recently adopted a purebred Himalayan cat. His concave face and body makes breathing difficult and the back of the hairs behind his ears are pulling down, pulling and resulting in irritation. He also has fur mats like cotton candy and requires constant clipping, which can be painful and painful. I have told that some Himalayan owners put on a "lion's skin." If the owner decides that this is correct, then he is right, and I should be prepared to anesthesia to remove all the fur from my face, tail and paws. Luckily, my adopted cat is extremely intelligent, which means that he would understand me if I asked him to leave me alone. We live in a very close community.*

● >>> overall ranking: A > B - C

- **Reasons:** A is generally grammatical and coherent. C has some grammatical errors such as “I can add one of my those problems” and repetitions such as “pulling down, pulling and. . .”, “which can be painful and painful”, and some semantic problems such as “remove all the fur from my face, tail and paws”. B has grammatical errors such as “I not, however, read. . .”, “if I didn't to stand. . .”, and some semantic problems, such as “Her fur mats like cotton candy and requires constant clipping” and “stand in front of the electric chair”.

(Annotators do not need to provide reasons for the rank.)

Figure 2: Evaluation guidelines on the second human study and annotation examples.

Prompt: CMV : The EU need its own independent armed forces
HUMAN: I wonder what you think the primary benefit of a military under the authority of EU institutions would be. It strikes me that the EU is already able to deploy its armed forces without UN Security Council authorisation - - the EU member states, or any subset of EU member states, can decide to do so. Do you think the primary advantage of a EU military is that military operations conducted under the authority of EU institutions would have a level of legitimacy that neither individual national states (or coalitions of such states) or the UN security council could provide? If so, can you say more about why you think that?
KPSEQ2SEQ: Well, if the EU is armed forces it has the authority. If the EU is armed forces it has the authority. Even the "authority" does not give them that advantage. If it does they are just not armed.
PAIR_{light}: To me, the primary benefit of having a military is the authority of EU institutions. By having the EU armed forces, you have UN Security Council authorisation from the EU member states (or any subset of EU member states, depending on who you ask). I think the primary advantage of having a EU military is a level of legitimacy to have your own, your military operations conducted under the authority of EU institutions, and a level of legitimacy that it simply would not exist if they are conducted under the authority of individual national states or coalitions such as most states in the UN security council. 2
PAIR_{full} w/o refine: I don't see the primary benefit of a military under the authority of EU institutions. Personally, I don't think the EU is much different from the UN armed forces... UN Security Council authorisation applies to the EU member states, but any subset of EU member states that is not fully armed cannot. Also, the primary advantage of a EU military is that military operations conducted under the authority of EU institutions still have a level of legitimacy which allows individual national states, or coalitions of such states, to the UN security council, so it's less likely to fall under the less - delegated. So, I would argue that it
PAIR_{full}: I don't see the primary benefit of a military under the authority of EU institutions. Instead, I think the EU should set up it's own armed forces with UN Security Council authorisation, to the EU member states, or any subset of EU member states that wishes not to participate. Ultimately, the primary advantage of a EU military is that military operations conducted under the authority of EU institutions already have a level of legitimacy comparable to individual national states, or coalitions of such states, to the UN security council. I think there's likely to be less the other way around but likely to be more the other.)

Figure 3: Sample outputs on argument generation.

Prompt: CMV : We shouldn't raise the minimum wage to \$ 15 an hour or something similar.
HUMAN: People need to live. They need to be able to afford basic things like food, housing, education, transportation and clothes. Currently, that isn't possible with most minimum wages in the US. It's disgraceful that businesses are allowed to let workers have one or more full time jobs without paying them enough to live a very basic life. Increasing the wages will decrease the profits of the company. But who does that hurt? In most cases it's the really wealthy owners, the CEO's and others in the top 1%. Is that really a bad thing? I'm not saying that they shouldn't be allowed to make lot of money, but do you really believe that they should be able to make that money at the cost of the people they employ? If the businesses aren't able to survive while paying living wages to their workers, maybe they should give the place to someone that can?
KPSEQ2SEQ: So why are there cases where wages will skyrocket, and not people who just do basic things. Why not? People should be able to have their wages grow and if you say that that money is the best then yes. But if that is not what you're arguing then it doesn't say much.
PAIR_{light}: People want to earn as much as possible. They want to be able to afford basic things like food, housing, education, transportation, clothes, and so on. If minimum wages go up they will have to go up. Increasing the wages will decrease the profits of the company. In most cases these tend to be wealthy owners who are often the CEO's of the top 1% of the US. This is a bad thing. Because if you make lot of money, you make that money at the cost of the people around you. So the businesses need to be willing to pay living wages to their workers and give the place to it's workers.
PAIR_{full} w/o refine: People should be given as little as it takes to afford basic things like food, housing, education, transportation, clothes, etc. However, when you think minimum wages should never be set. It's disgraceful for businesses to discriminate against their workers and work in more full time jobs, where someone has to pay for their basic life. Increasing the wages will decrease the profits for the company where it hurts most. And in most cases it's the extremely wealthy owners or the CEO, not necessarily about the top 1%. But this is a bad thing for everyone. You have to be willing to set aside somewhere between make lot's and make that money, but the cost is not all the
PAIR_{full}: People can work as much as it takes to afford basic things like food, housing, education, transportation, clothes, etc. So, that is what minimum wages should be based on. It is disgraceful for businesses to discriminate against their workers because to get more full time jobs is not for them to live for their basic life. Increasing the wages will decrease the profits of the company they pay them for. In most cases, they do have wealthy owners - the CEO may be already in the top 1%. And that is a bad thing. It is much harder to find something to live for. Now they make lot more to make that money, but the cost is higher for the people)

Figure 4: Sample outputs on argument generation.

Prompt: Putting Profit Above Health	
HUMAN:	Re “Chicken With Arsenic? Is That O.K.?” (Eating Well, April 5): Chicken with arsenic is most certainly not O.K. Most chickens raised for meat in the United States continue to be fed this poison, making most chicken meat at risk for contamination. It says a lot about the filthy, overcrowded conditions in which most factory-farmed chickens are confined that the addition of antibiotics or antiparasitic compounds like arsenic can result in such profitable increases in growth. By selectively breeding chickens for healthier immune systems instead of just for plumper meat, the industry can move away from risky crutches like arsenic. Especially now, with the threat of avian influenza, the industry can no longer be allowed to let its bottom line trump human or animal health.
KPSEQ2SEQ:	Re “The Real Face of Chicken” (editorial, Feb. 16): A major health hazard of factory-farmed chickens raised for meat comes from contamination of meat and poultry with arsenic, pesticides and hormones. Arsenic is made by breeding chickens in the presence of antiparasitic compounds. As an alternative, people with higher blood levels may have healthier immune systems. People with high cholesterol may be able to eat more plumper meat. People with high blood pressure may be able to eat more of their own blood. The only question in this whole controversy is whether the animal farming industry values animal health over human health. For the vast majority of chickens raised for meat, the health risks are less than if they had been raised in natural settings instead of in the filthy, overcrowded conditions of factory farms. Even with the most sophisticated new technology, the industry continues to use antibiotics and heavy metal, making the supply of chicken meat much more vulnerable to contamination, including by avian influenza. It also puts people on risky crutches.
PAIR_{light}:	Re “Chicken With Arsenic? It Defends itself,” by Michael O’Hanlon (Editorial Observer, April 2): Chicken with arsenic and cancer-causing, too, poses threat to humans by being raised for meat, making one of the world’s largest source of chicken meat contamination. The F.D.A.’s recent report on meat-producing farms shows that at least half of the cases in the United States – the filthy, overcrowded conditions of factory-farmed chickens – have been related to diseases that range to the use of antibiotics and antiparasitic compounds like arsenic, which causes cancer in the body. Yet, in the name of cutting costs and breeding chickens with healthier immune systems and plumper meat, the industry has put the healthiest members of its ranks on, risky crutches, on the line – and, in this case, in the case of China, exposing them to arsenic. This is a practice that is a source of profit for the industry and, such as avian influenza, the industry’s bottom line.
PAIR_{full} w/o refine:	Re “Chicken Arsenic? Not Really” (editorial, March 13): Your editorial raises several important Chicken Against arsenic issues. First, the fact that millions of chickens raised for meat are slaughtered each year means that there are millions of pieces of chicken meat that are without contamination. Second, the effects of the filthy, overcrowded conditions on factory and factory-farmed chickens mean that the natural addition of antibiotics and antiparasitic compounds to arsenic is unnecessary. And third, in addition to raising and breeding chickens with healthier immune systems and producing healthier and plumper meat, the industry also uses the equally risky crutches of arsenic. When it comes to the spread of avian influenza, the industry’s bottom line should be a bottom-line decision, not an ethical health one.
PAIR_{full}:	Re “Chicken Arsenic? Get Out!” (editorial, April 21): Your editorial is right. Chicken has arsenic in its blood, and given that millions of chickens raised for meat are slaughtered every year, that is a large portion of all of chicken meat’s sources of contamination. Second, another consequence of the filthy, overcrowded conditions of factory and factory-farmed chickens is that they are given antibiotics and antiparasitic compounds, arsenic and antibiotics. And third, by trying to save money and breeding chickens with healthier immune systems in the name of plumper meat, the industry is surviving on the risky crutches of arsenic. When it comes to the fear of avian influenza, the industry’s bottom line should be bottom-line profits, not public health and safety. Chicago, April 23, 2005

Figure 5: Sample outputs on opinion generation.

Prompt: The World's Best Job	
HUMAN:	I read with interest your article about travel writers. While I'm sure that those travel writers who research guides to Goa and Romania have a rough time, the article really doesn't paint a complete picture of all travel writers. It's true that most of us don't make a fortune on our books and that research trips can be hectic, but some of us clearly do have the ideal job or hobby. I am an author of "Eating & Drinking in Paris" and "Eating & Drinking in Italy," among other travel guides. Can you imagine a better job than researching restaurants, bars and cafes in France and Italy?
KPSEQ2SEQ:	Regarding the article about travel writers ["Drinking, Eating and Pining" in April 15]: I've found that my hobby is researching restaurants and cafes. It is the ideal job for a traveler. I have been doing research trips to Goa, Greece, Romania, Italy, South America and Europe, among other travel guides. That's why I think all travel writers should get back on their feet. Being a part owner, traveling writer, my partner and I have traveled to India and have taken our sons and daughters on trips. I can't imagine a better job for me. If I have a rough time with time management, just write and I'll get it. My job does require overtime, but my life is not hectic enough. And the best part is that I can share my stories with all those travel writers who write about their trips. Travel writers should ask about research guides and why they write about it.
PAIR_{light}:	I would like to thank Kerry Brown who reminded us what a wonderful part of the world it is for travel writers and the part of the world that requires so much of us. While she is probably one of those travel writers who "research and I," research guides in Goa, Romania or anywhere else she chooses, the travel writer has a rough time finding a home for all travel writers no matter where we are or how to do it. And for the most part, when we are not at home we do our research trips in a very short period of time, which is hectic and mind-nanding, but it is still the ideal job and hobby for us. Ms. Brown's article was timely, because one of the offices of the Food and Drug Administration, which is mentioned in the article as a source, wrote about a guide, "Eating and Drinking in Italy, along with the work of other travel guides, on how to eat well and drink there." I cannot imagine a better job than researching restaurants and cafes in Italy, as it would be to do so every day if I traveled to places as far as Italy and as far as parts of the world.
PAIR_{full} w/o refine:	It was good to see about travel writers. I am a little sorry those travel writers and research guides from Goa and Romania had a rough time there, but there is a whole industry, which is all travel writers. They work very hard, very well, they can travel around the world (and do research trips that are hectic), and they are certainly more than the ideal job and hobby. I was very happy to find "Eating and Drinking in Italy," by Pia Portora Drinking in Italy, and other travel guides. Can you imagine a better job than researching restaurants, stores and cafes in Paris and Italy?.
PAIR_{full}:	I was happy to see that travel writers are getting better. Many of those travel writers and research guides in Goa and Romania had a rough time there, but the vast majority of them, as is all travel writers. They all work hard and do a lot of research trips all over the world. They research trips, are hectic, and they are much more than the ideal job or hobby. I was particularly struck by the "Eating and Drinking in Italy," by Maliafra Drinking in Italy, and other travel guides. Can you imagine a better job than researching restaurants, hotels and cafes in places like Italy? I can.

Figure 6: Sample outputs on opinion generation.

<p>Prompt: McGarry Bowen Added To Kraft Agency Roster</p>
<p>HUMAN:</p> <p>Kraft Foods is expanding its agency roster by naming McGarry Bowen in New York to create campaigns for salad dressings, mayonnaise and barbecue sauces bearing the Kraft brand name. Spending was estimated at \$30 million to \$40 million. The hiring of McGarry Bowen is part of a trend on Madison Avenue, as big marketers like Kraft shift creative assignments to smaller, independent agencies from larger agencies owned by holding companies. The Chicago office of JWT, part of the WPP Group, had created ads for Kraft salad dressings, while the Chicago office of Foote Cone & Belding, part of the Interpublic Group of Companies, had created ads for the other products. Both JWT and Foote Cone remain on the Kraft agency roster.</p>
<p>KPSEQ2SEQ:</p> <p>Re “Kraft to hire an ad agency” (front page, Jan. 12): Not only has the Chicago office of JWT, which is part of Kraft Foods, made an important contribution to the campaign to take the campaign off the ground, but it is also part of an industry trend that has seen major companies like JWT shift creative assignments to independent agencies. Both JWT and Kraft remain on the Kraft agency roster. The Chicago office has not changed its agency roster, so it is not part of the process. In fact, in the last month, we have created ads for potato chips, salad dressings and barbecue sauces that have never before been used by anyone bearing the Kraft brand name in an advertising campaign. It is also one of the last major, publicly traded advertising campaigns to be financed by one of the nation’s big marketers. Instead of naming McGarry Bowen to represent us, McGarry Bowen is now being hired by one of our larger agencies, Foote Cone of New York. McGarry Bowen is one of the world’s largest marketers of Kaffeeklatsch, Belding and other soft-drink brands and the maker of Kraft salad dressings and mayonnaise.</p>
<p>OURS_{order}: + refine</p> <p>Kraft Foods in Cincinnati is expanding its agency roster by naming McGarry & Bowen in Chicago to create ads for its salad dressings, mayonnaise and even barbecue sauces bearing the Kraft brand name. Spending was estimated at more than \$200 million. McGarry & Bowen’s hiring is part of a trend by big marketers like Kraft to shift creative assignments from independent agencies to larger agencies. The Chicago office of JWT, part of the WPP Group, created ads for Kraft’s “soup” dressings and mayonnaise as well as those for other products; the Chicago office of Foote Cone & Belding, part of the Interpublic Group of Companies, created ads for “soup” dressings, for which Kraft is a producer of record, as well as for General Mills. Both JWT, part of the Omnicom Group, and Foote Cone still remain on the Kraft agency roster. The decision comes after Foote Cone, part of Foote Cone & Be, agreed to become a consultant to McGarry & Bowen on the account. Both McGarry & Bowen, part of the Omnicom Group, and J. Walter Thompson Worldwide in New York, and WPP Worldwide Advertising of Kansas City, Mo., continue to create ads for Kraft.</p>
<p>PAIR_{full} w/o refine:</p> <p>Kraft Foods expanded its agency roster by naming McGarry Bowen in New York to create campaigns for salad dressings, mayonnaise and barbecue sauces bearing the Kraft brand name. Spending was estimated at \$20 million. The decision to open an agency with McGarry Bowen is part of a trend in which large clients like big marketers like Kraft shift creative assignments from large, independent agencies to larger agencies in the same market. The Chicago office of JWT, part of the WPP Group, had created ads for Kraft salad dressings, and the Chicago office of Foote Cone & Belding, part of the Interpublic Group of Companies, had created ads for its ice cream. Both JWT and Foote Cone remain on the Kraft agency roster.</p>
<p>PAIR_{full}:</p> <p>Kraft Foods expanded its agency roster by naming McGarry Bowen in New York to create campaigns for salad dressings, mayonnaise and barbecue sauces bearing the Kraft brand name. Spending was estimated at \$10 million. The decision to expand its relationship with McGarry Bowen is part of a trend in which big marketers like big marketers like Kraft shift creative assignments from small, independent agencies to larger agencies at the same time. The Chicago office of JWT, part of the WPP Group, had created ads for Kraft salad dressings, while the Chicago office of Foote Cone & Belding, part of the Interpublic Group of Companies, had created ads for ice cream. Both JWT and Foote Cone remain on the Kraft agency roster.</p>

Figure 7: Sample outputs on news generation.

Prompt: Two Held in Man's Death
HUMAN: A 17-year-old girl and a 16-year-old boy were arraigned as adults in State Superior Court here yesterday in the stabbing death of a 34-year-old New Britain man attacked outside his home earlier this week. The teenagers, Elsie Figueroa, 17, and Luis Gabriel Rivera, 16, did not enter pleas to the charges of murder and conspiracy to commit murder, and each was being held in \$1 million bail. In addition, a 13-year-old boy was charged as a juvenile in the killing and was scheduled to appear in juvenile court on Monday. His name was withheld because of his age. On Wednesday night, the New Britain man, Jaroslaw Sawicki, was found bleeding from stab wounds to the chest near the home he shared with his parents, the authorities said.
KPSEQ2SEQ: I am a 16-year-old boy, whose brother was murdered at the age of 13, a victim of Elsie Figueroa's violence in 1987, and who will be charged as a juvenile. I was one of the people at the scene when Luis Gabriel Rivera stabbed his first wife, Jaroslaw Sawicki, to death at the age of 14, and I was the only witness to a 34-year-old New Britain man's stabbing death, with all of the help of a 13-year-old boy, who was bleeding from stab wounds. The teenagers charged are all in custody, and they have a good chance of not getting to see the New Britain man again. The young people charged, who have no previous criminal record, did not commit murder, and they should not be held accountable in juvenile court. Instead, they should be allowed to enter pleas of guilty, and they should be given the benefit of the doubt.
PAIR_{light}: The parents of a 16-year-old boy charged with manslaughter in the stabbing death of a 34-year-old New Britain man were arrested. The teenagers were arraigned in Superior Court here on Thursday charges that they and two of the parents, Elsie Figueroa, and her son, identified as Luis Gabriel Rivera, were arraigned and forced to enter pleas to two counts of murder in the first degree, one conspiracy to commit murder and weapons possession. Mr. Castillo's father, Antonio Castillo Jr., who is also the father of a 13-year-old boy, was not released here as he was arraigned and charged as a juvenile in juvenile court. The indictments, which were reported Friday in The News of Westport, were made by the Suffolk County prosecutor's office. The authorities say they believe the New Britain man, Jaroslaw Sawicki, was stabbed six times in the head. The police said the cause of death of Mr. Castillo, who was bleeding from stab wounds, has not been determined but that surgically, Sawicki was dead by the time. Mr. Castillo's lawyer, Robert R. Gross, said, "We don't know anything that indicates that he was ever stabbed" and denied that his client was stabbed because of his age. "Our client is continuing to fight," Mr. Gross said. "We are going to continue to try to get to the bottom of this of the whole thing."
PAIR_{full} w/o refine: The mother of a suspect here and a 16-year-old boy were arraigned yesterday on charges that they took part in the fatal stabbing death of a 34-year-old New Britain man on Nov. 3, officials said. The teenagers, Elsie Figueroa, 17, and Luis Gabriel Rivera, were not required to enter pleas; the two were charged with conspiracy to commit murder, a felony. Another suspect in the case, Jose Rodriguez, 17, a 13-year-old boy, charged as a juvenile, is to be tried as an adult in juvenile court on Nov. 15. All three are free on bond. The police said that the New Britain man, Jaroslaw Sawicki, was found bleeding from stab wounds to the neck and head. He was pronounced dead on Nov. 3 at
PAIR_{full}: A pair of teenagers, one and a 16-year-old boy, were arraigned yesterday on charges that they took part in the stabbing death of a 34-year-old New Britain man on Dec. 18, officials said. The teenagers, Elsie Figueroa, 17, and Luis Gabriel Rivera, 16, declined to enter pleas for themselves and were charged with conspiracy to commit murder, a felony. Also yesterday in the case, the police, said, a 13-year-old boy was charged as a juvenile, and will likely be tried as an adult in court. Ms. Figueroa was released on bond. The police said that the New Britain man, Jaroslaw Sawicki, was found bleeding from stab wounds in the basement of his home and was pronounced dead at St. Joseph.

Figure 8: Sample outputs on news generation.