A Data Collection: Details

Here we describe additional details that we face during our data collection. There are some technical difficulties we faced during annotations:

- Since it is nontrivial to verify whether the annotator had understood our instructions insufficiently, we filter out very short sentence annotations.
- Some images from *VIST* were too heavy to load or unavailable. Most annotators mark "No Image", "Image not Loaded" etc for such images. We filter out such annotations using hand-coded filtering rules.
- Some annotators exploit the large number of HITs available and difficulty of verification to game the study and perform large number of HITs carelessly. We manually block such annotators after a minimum threshold.
- We increase pay from 0.07 to 0.11 based on annotator feedback.

Finally, we filter out 4.6% of noisy annotations.

Figure 5 shows a part of our annotation schemes for asking annotators to generate sentences given a sequence of stories, keywords, and reference sentences.

B PASTEL: Details

Style	Categories with number of stories annotated
gender	Male (1320), Female (2908), Others (45)
age	<12 (4), 12-17 (1), 18-24 (1050), 25-34 (1527), 35-44 (720), 45-54 (475), 55-74 (493), 75< (3)
ethnic	Hispanic/Latino (81), MiddleEastern (4), SouthAsian (27), NativeAmerican (115), PacificIslander (26), CentralAsian (3), African (270), EastAsian (112), Caucasian (3521), Other (114)
country	UK (98), USA (4172), Others (3)
edu	Associate (423), TechTraining (488), NoSchool (3), HighSchoolOrNoDiploma (47), Bachelor (1321), Master (440), NoDegree (939), HighSchool (557), Doctorate (55)
politics	Centrist (1786), LeftWing (1691), RightWing (796)
time	Morning (1103), Evening (392), Midnight (282), Afternoon (1666), Night (830)

Table 8: Distribution of stories.

Table 8 shows distribution of stories for each category of styles.

We also conduct add *Meaning Preservation* human study to evaluate the quality of annotations. We recruit different annotators from the data col-

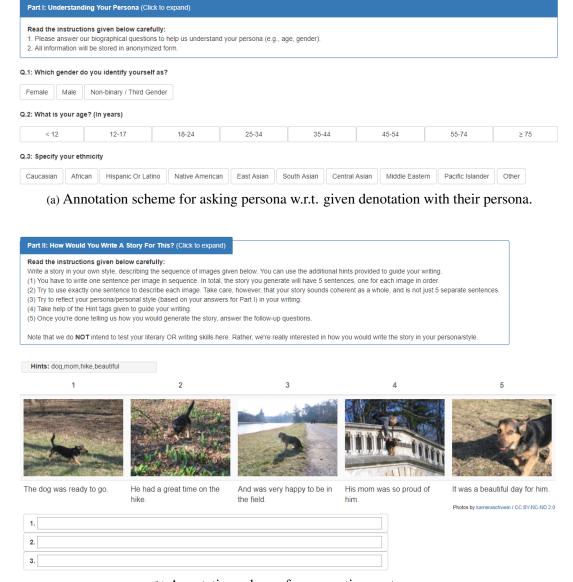|	Sent	Story	Quora
Avg. Preservation	2.69	3.89	3.72
Avg. Fluency	4.02	3.46	4.07
Highly Preserved %	45.2	77.4	83.5
Highly Preserved&Fluent %	44.6	76.3	80.1

Table 9: Quality statistics of PASTEL.

lection and ask them to rate the two following questions under 5 point scale: (1) Does an annotated sentence S_2 from our dataset preserve the meaning of the original reference sentence S_1? and (2) How fluent S_2 is? We sample three annotations each for 1000 sentences and 800 stories from our test dataset. For a scale-calibration, we also annotate Quora (Iyer et al., 2017) by asking annotators to evaluate the Quora pairs as a control. Table 9 summarizes the results. In detail, we see that the story-level annotations keep more meaning presentation, while the sentence-level ones hold more fluency.

C Controlled Style Classification: Details

For controlled setting, Table 10 shows label distribution for each combination of external variables. We calculate the final f-scores of each style by macro averaging the combinations. If a combination has zero number of instances for one type of class value, we ignore them in the calculation.

Table 11 and Table 12 show randomly chosen examples from the validation split of our dataset. It shows reference sentence and some sentences written by our annotators, along with their associated demographic traits. Table 13 has more model outputs in style tranfer.

(a) Annotation scheme for asking persona w.r.t. given denotation with their persona.

(b) Annotation scheme for generating sentences

Figure 5: A part of our annotation schemes for asking annotators to generate sentences given a sequence of stories, keywords, and reference sentences.

target: **politics**	LeftWing	RightWing
(Male, 18-24, NoDegree)	59	206
(Female, 18-24, Bachelor)	147	42
(Female, 18-24, NoDegree)	95	15
(Male, 35-44, Bachelor)	21	4
(Male, 18-24, Bachelor)	18	11
(Female, 35-44, Bachelor)	63	13
(Female, 35-44, NoDegree)	24	7
(Male, 35-44, NoDegree)	-	12

target: **age**	18-24	35-44
(Female, NoDegree, LeftWing)	95	24
(Male, Bachelor, RightWing)	11	4
(Female, Bachelor, LeftWing)	147	63
(Male, NoDegree, LeftWing)	59	-
(Female, NoDegree, RightWing)	15	7
(Male, NoDegree, RightWing)	206	12
(Male, Bachelor, LeftWing)	18	21
(Female, Bachelor, RightWing)	42	13

target: **education**	NoDegree	Bachelor
(Male, 35-44, RightWing)	12	4
(Female, 18-24, LeftWing)	95	147
(Female, 35-44, RightWing)	7	13
(Male, 35-44, LeftWing)	-	21
(Male, 18-24, LeftWing)	59	18
(Female, 18-24, RightWing)	15	42
(Female, 35-44, LeftWing)	24	63
(Male, 18-24, RightWing)	206	11

target: **gender**	Male	Female
(18-24, Bachelor, LeftWing)	18	147
(35-44, NoDegree, RightWing)	12	7
(18-24, NoDegree, LeftWing)	59	95
(35-44, Bachelor, LeftWing)	21	63
(35-44, NoDegree, LeftWing)	-	24
(35-44, Bachelor, RightWing)	4	13
(18-24, Bachelor, RightWing)	11	42
(18-24, NoDegree, RightWing)	206	15

Table 10: Label distribution for each combination of external variables in Controlled Style classification.

No	Style	Text
1	*Reference* HighSchool Bachelor	went to an art museum with a group of friends . My friends and I went to a art museum yesterday . I went to the museum with a bunch of friends .
2	*Reference* British, HighSchool, Female American, Graduate, Female	dad always said if you misbehave, you will end up in the local jail misbehaving people sent to local jail . They misbehave at the local jail .
3	*Reference* American, Graduate, Female American, Graduate, Male	This one was really cool as it rolled down the hill with the people in it. Rolling together is a messy, but bonding experience. He rolled with other people down the hill.
4	*Reference* Female Male	in the woods, there was a broken tree . A broken tree stands in the center of a path in the woods . Doing my daily walk in the fores and I decided to go a different path and look what I came across , a tree in the middle of a path , interesting .
5	*Reference* Caucasian, Doctoral NativeAmerican, Masters	the vehicles were lined up to marvel at . I went to the car show. The car is the super.
6	*Reference* VocationalTraining AssociateDegree	we went to a concert last night . The concert we went to last night was great . I have been looking forward to this concert all year .

Table 11: Sentence examples from the validation split of our dataset showing the reference sentence and some sentences written by our annotators, along with their associated demographic traits.

No	Style	Text
1	*Reference*	Went to an art museum with a group of friends . We were looking for some artwork to purchase, as sometimes artist allow the sales of their items . There were pictures of all sorts , but in front of them were sculptures or arrangements of some sort . Some were far out there or just far fetched . then there were others that were more down to earth and stylish. this set was by far my favorite.very beautiful to me .
	Caucasian, Female, HighSchool	My friends and I went to a art museum yesterday . There were lots of puchases and sales of items going on all day . I loved the way the glass sort of brightened the art so much that I got all sorts of excited . After a few we fetched some grub . My favorite set was all the art that was made out of stylish trash .
	Caucasian, Female, Bachelor	I went to the museum with a bunch of friends . There was some cool art for sale . We spent a lot of time looking at the sculptures . This was one of my favorite pieces that I saw . We looked at some very stylish pieces of artwork .
2	*Reference*	We went on a hiking tour as a family . We took a break so that we could hydrate and get something to eat . We were so glad to see the finish line of the hike . We were heading to the lodging for our overnight stay . The scenary was so beautiful on the tour .
	Caucasian, Female, Graduate, Night	This weekend , we took a hiking tour as a family . We had to remember to take a break to eat and hydrate . We hiked in a line , and I 'm glad we did . We decided to stay overnight in the provided lodging . The scenery of the tour was beautiful .
	Caucasian, Female, Graduate, Evening	Our family took a hiking tour along the blue ridge parkway . We took plenty of water and snacks so we could hydrate and eat on breaks . We were glad to hike in a line up the hill . We chose to stay overnight in some local lodging . We loved the tour and its beautiful scenery .

Table 12: Story examples from the validation split of our dataset showing the reference sentence and some sentences written by our annotators, along with their associated demographic traits.

No	Type	Text
1	*Reference*	the guy had buckets of food
	Bachelor, RightWing	Before they headed out for Spring Break, Joe went out and brought back food for the gang.
	HighSchool, LeftWing	In college , Mary knew a guy named Greg who always ate his food from buckets .
	M: Bachelor, RightWing	The food was filled with food.
	M: HighSchool, LeftWing	The food was filled with a lot of food .
2	*Reference*	the bride and groom walked down the aisle together .
	Midnight, Centrist	The bride and groom walked out after the ceremony .
	Night, RightWing	The bride and groom happily walked down the aisle after being pronounced "Man and Wife " .
	M: Midnight, Centrist	The bride and groom were ready to be married .
	M: Night, RightWing	The bride and groom were ready to be married .
3	*Reference*	we picked up our breakfast from a street vendor selling fresh fruits .
	NoDegree	Along the way , you could see vendors on the street .
	Bachelor	We loved the market stands .
	M: NoDegree	The family went to a restaurant .
	M: Bachelor	The family went to a restaurant for some delicious food .
4	*Reference*	I'd never seen so many beautiful flowers.
	Morning, HighSchool	the flowers were in full bloom.
	Afternoon, NoDegree	Tulips are one of the magnificent varieties of flowers.
	M: Morning, HighSchool	the beautiful flowers were beautiful.
	M: Afternoon, NoDegree	The flowers were very beautiful.

Table 13: Examples from PASTEL, along with model outputs of the best performing style transfer model. We show the Reference sentence (*Reference*) and some sentences written by annotators. We only show the style attributes that differ between the annotators. M*:* denotes the model output given the corresponding Reference as source sentence along with the same target style.