

# Appendix for A Survey of Transferable Relation Extraction

April 13, 2020

## A Visualization of Latent Representations of Source and Target Domains

### A.1 One-step transfer task: nw&bn → bc.

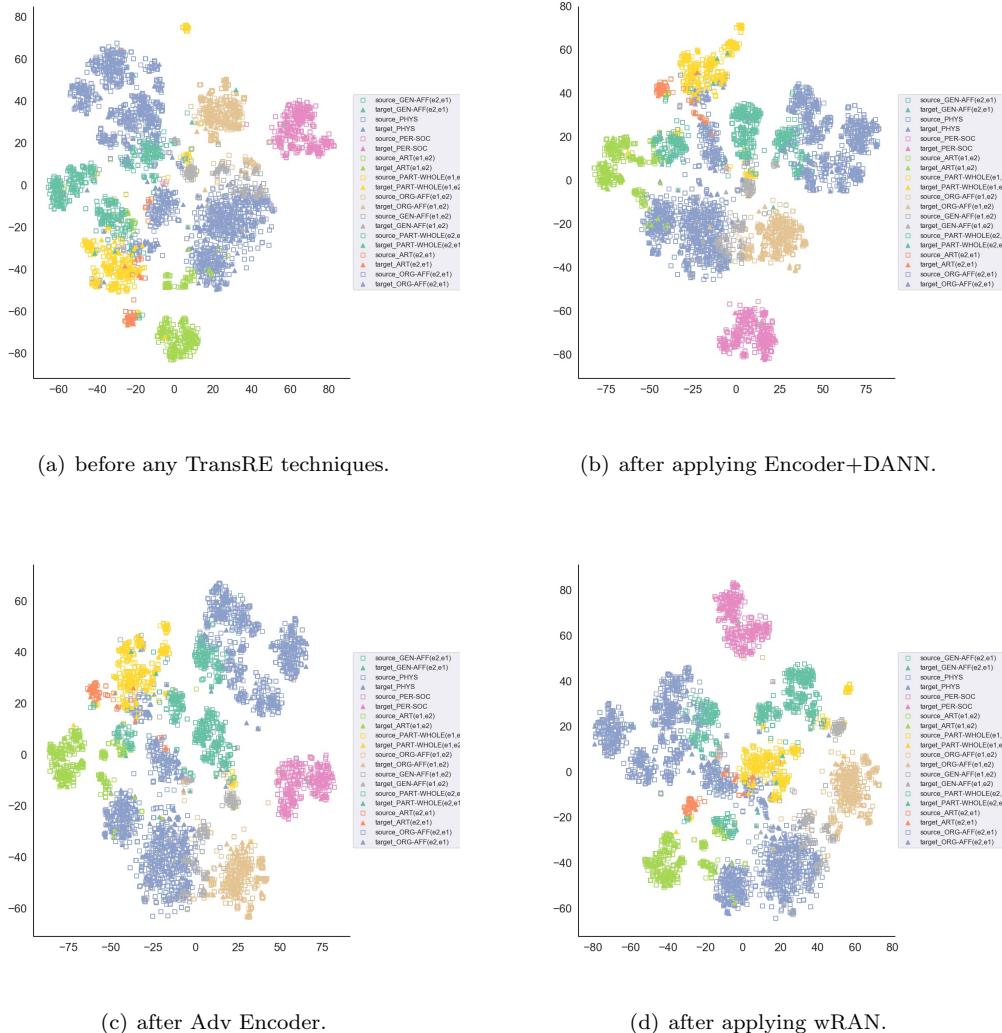


Figure 1: Visualization of latent representations of source and target Domains under the network framework with CNN1 as sentence encoder and **inner.emb** as input word embeddings.

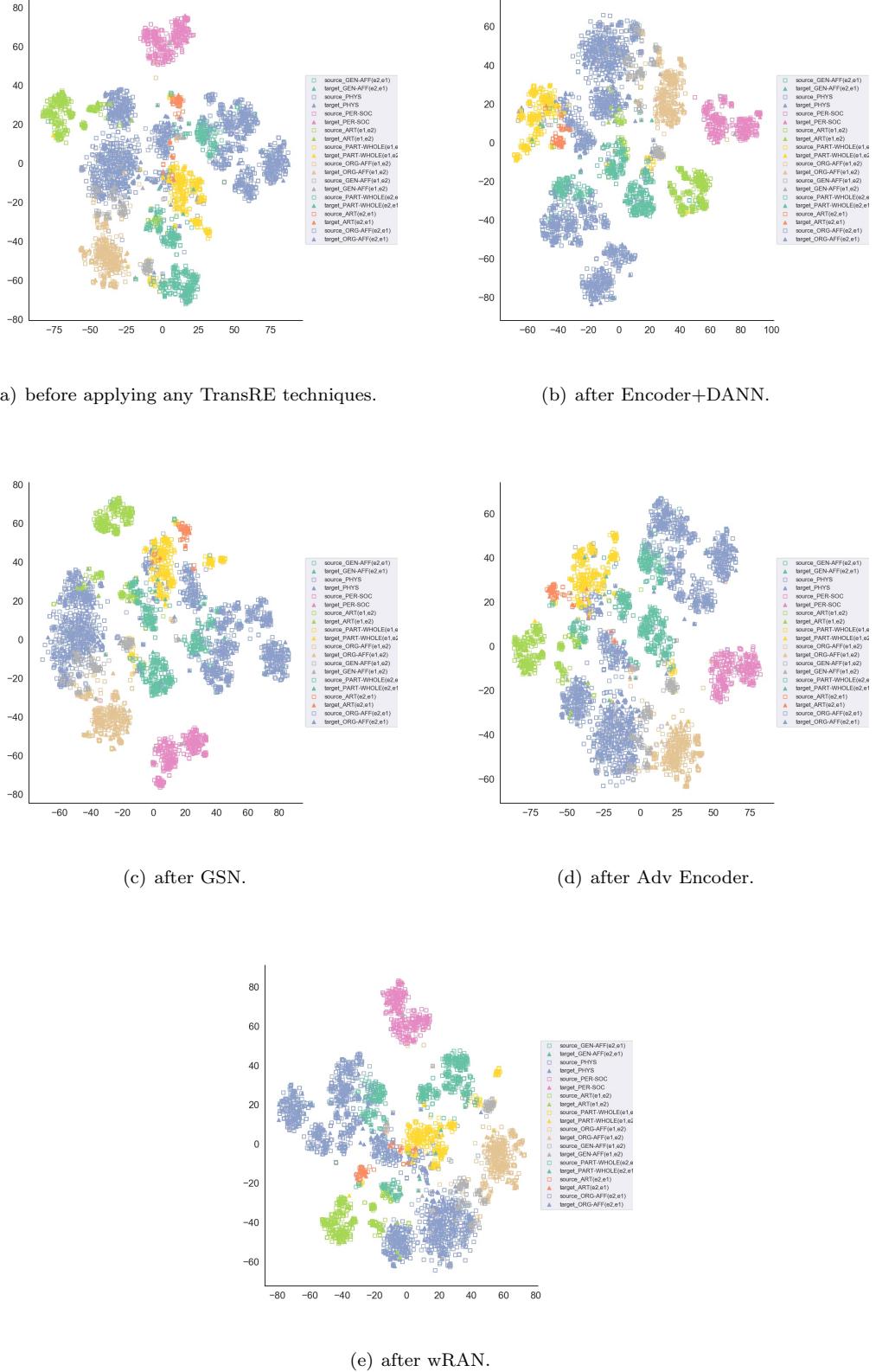


Figure 2: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **inner.emb** as input word embeddings.

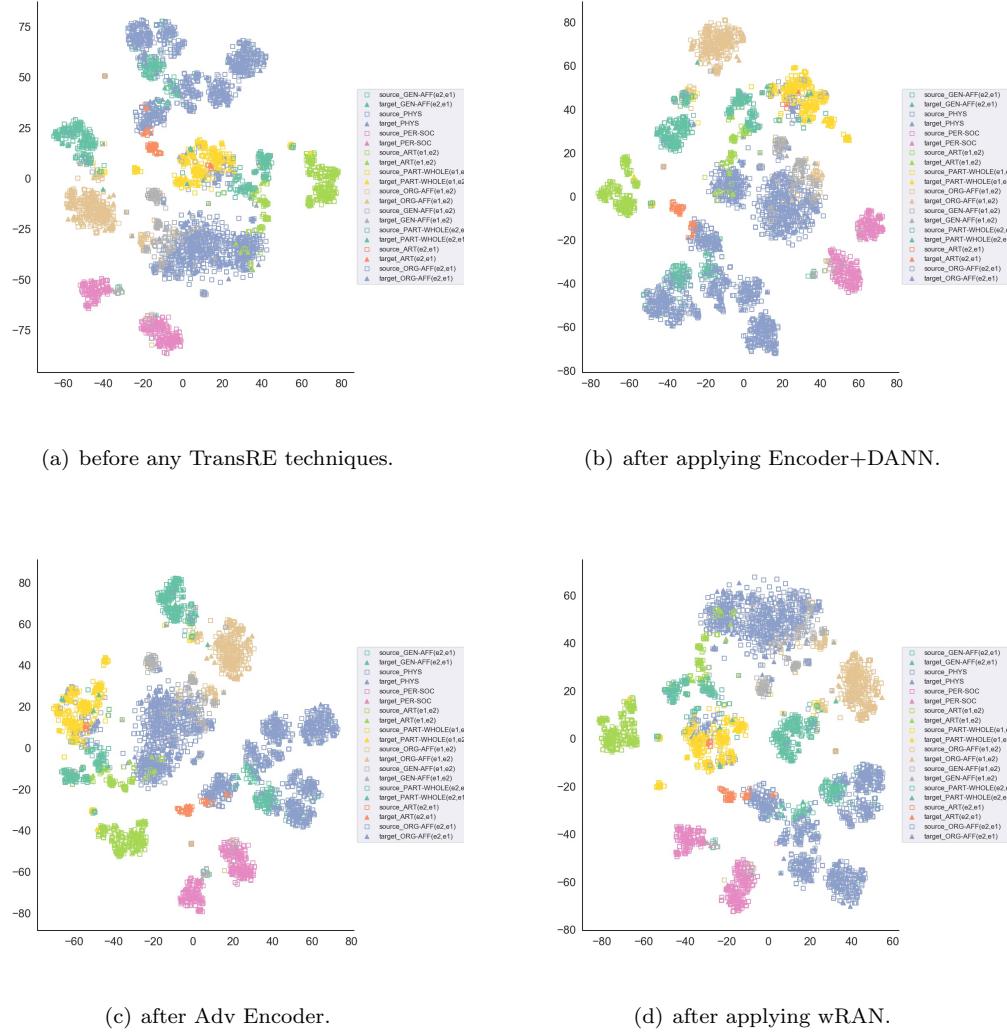
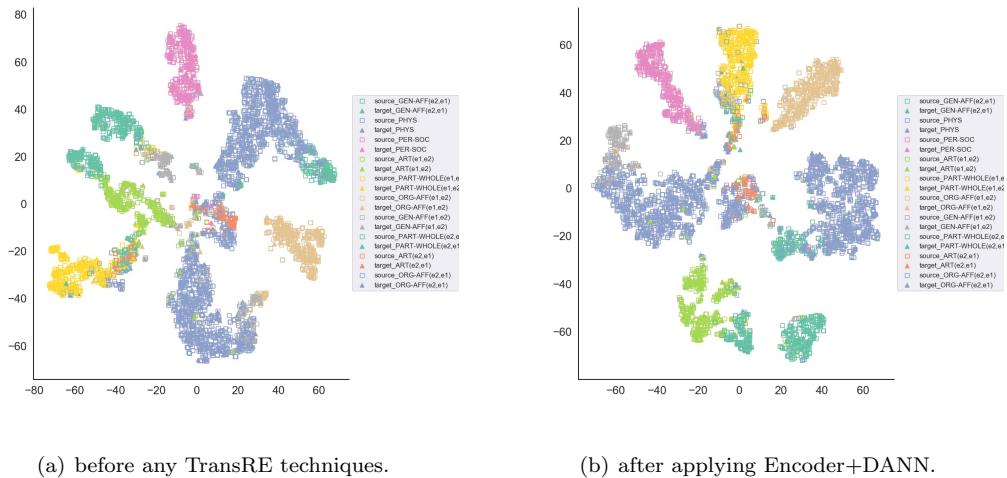


Figure 3: Visualization of latent representations of source and target Domains under the network framework with **PCNN** as sentence encoder and **inner.emb** as input word embeddings.



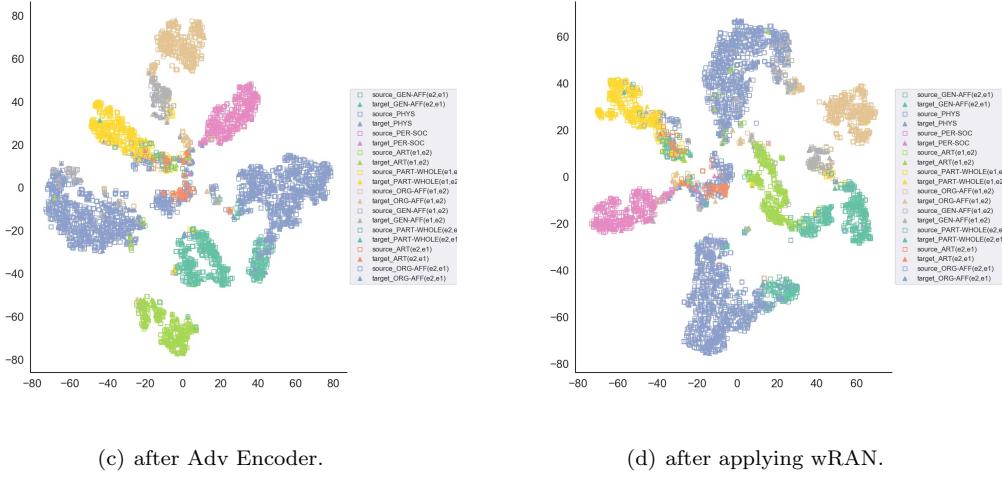


Figure 4: Visualization of latent representations of source and target Domains under the network framework with **BIGRU** as sentence encoder and **inner.emb** as input word embeddings.

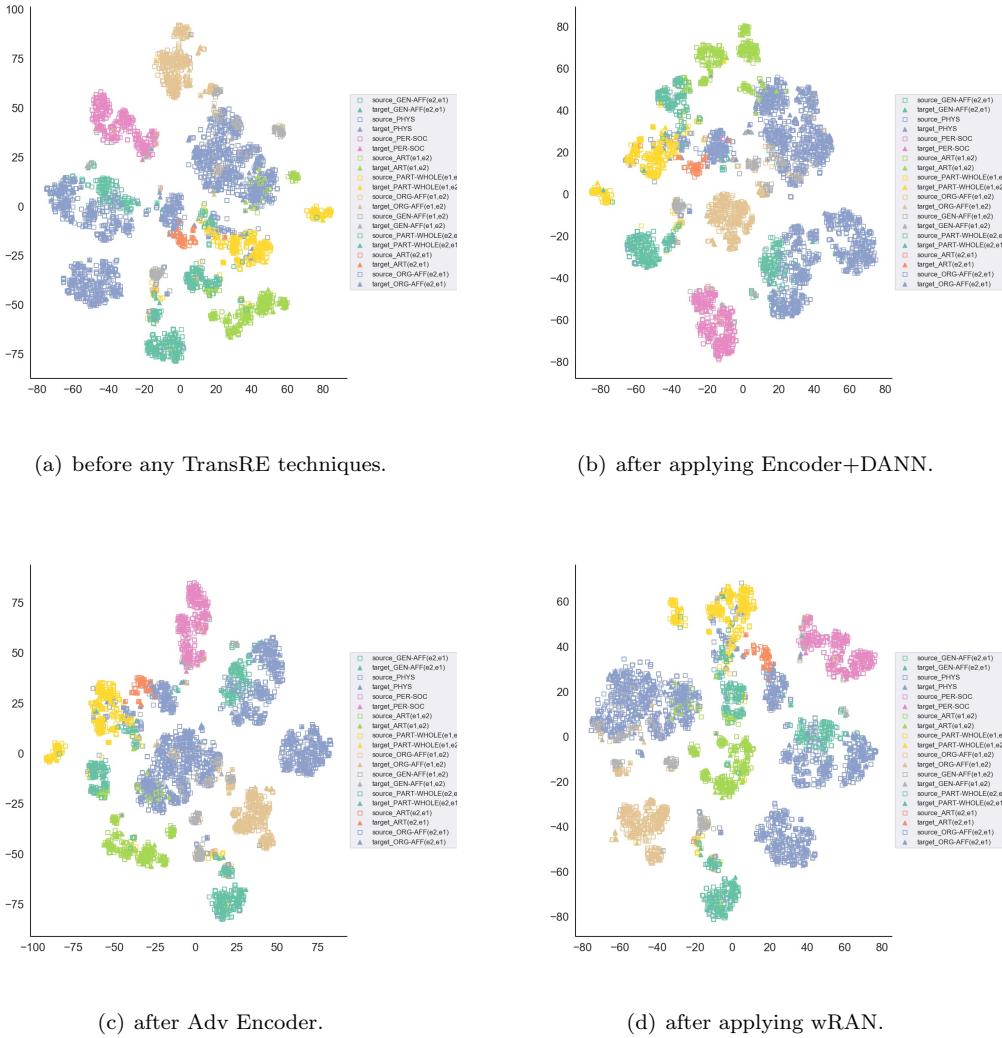
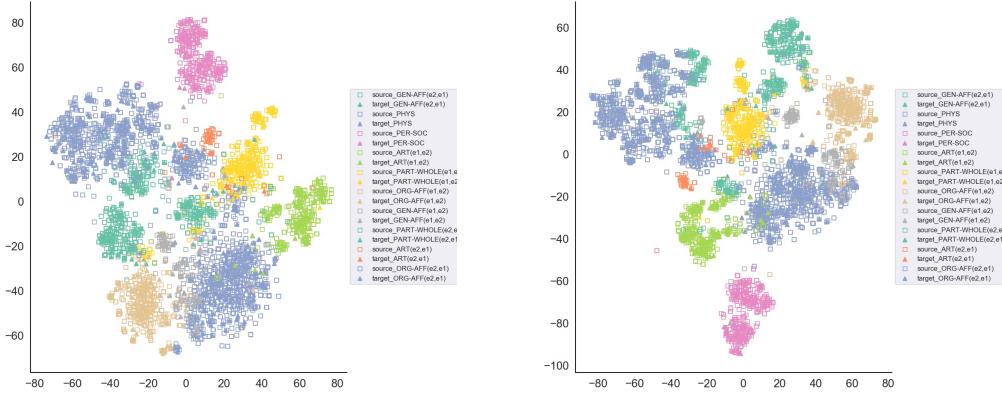
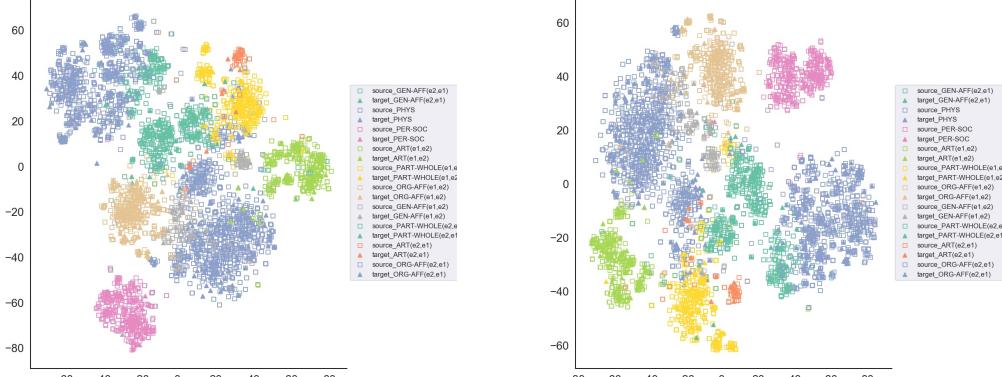


Figure 5: Visualization of latent representations of source and target Domains under the network framework with **BIGRU\_Att** as sentence encoder and **inner.emb** as input word embeddings.



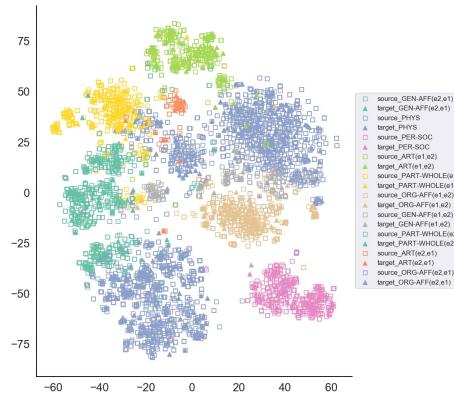
(a) before applying any TransRE techniques.

(b) after Encoder+DANN.



(c) after GSN.

(d) after Adv Encoder.



(e) after wRAN.

Figure 6: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **glove.6B.300d** as input word embeddings.

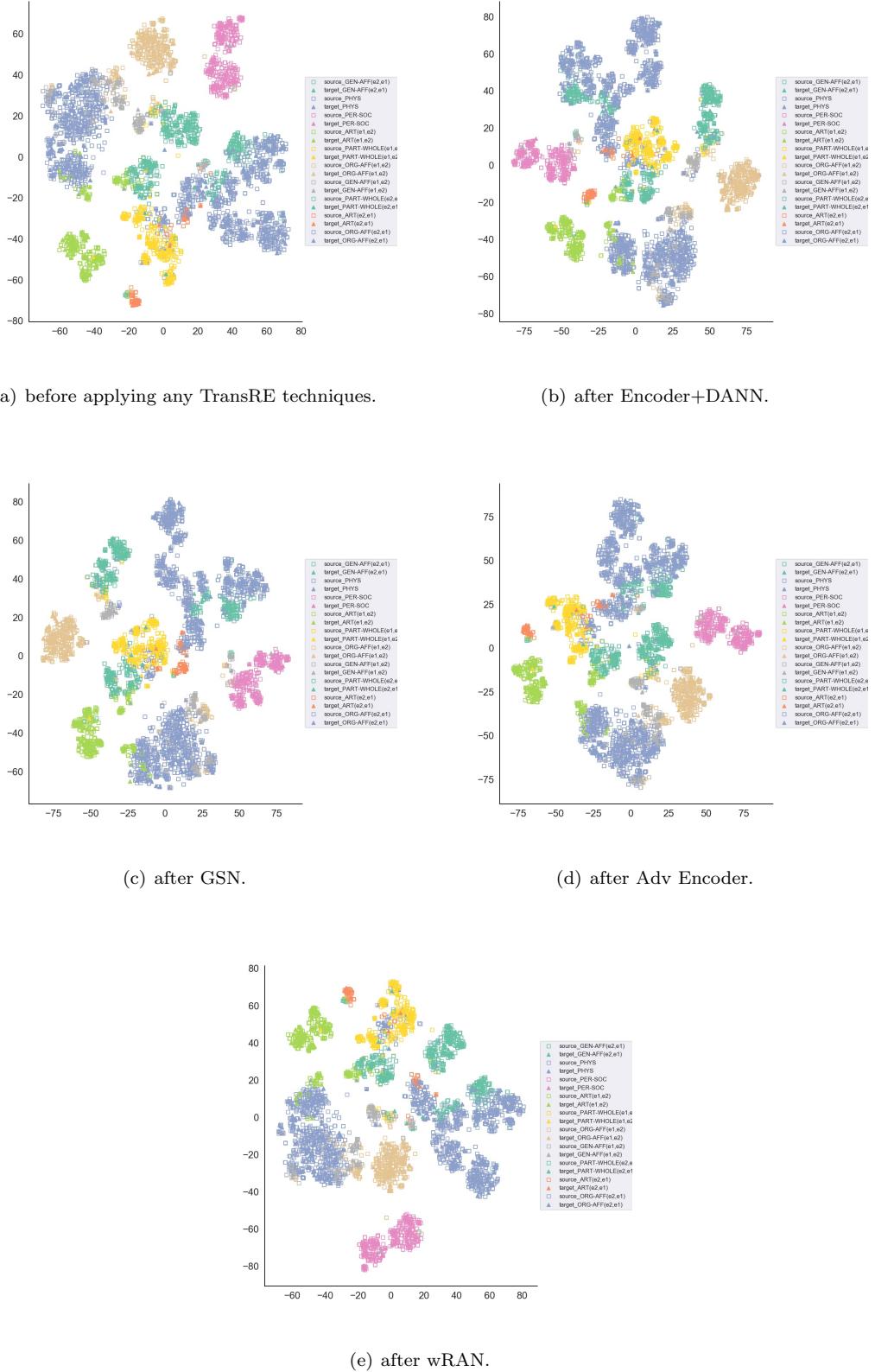


Figure 7: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **word2vec.google** as input word embeddings.

## A.2 One-step transfer task: nw&bn $\rightarrow$ cts.

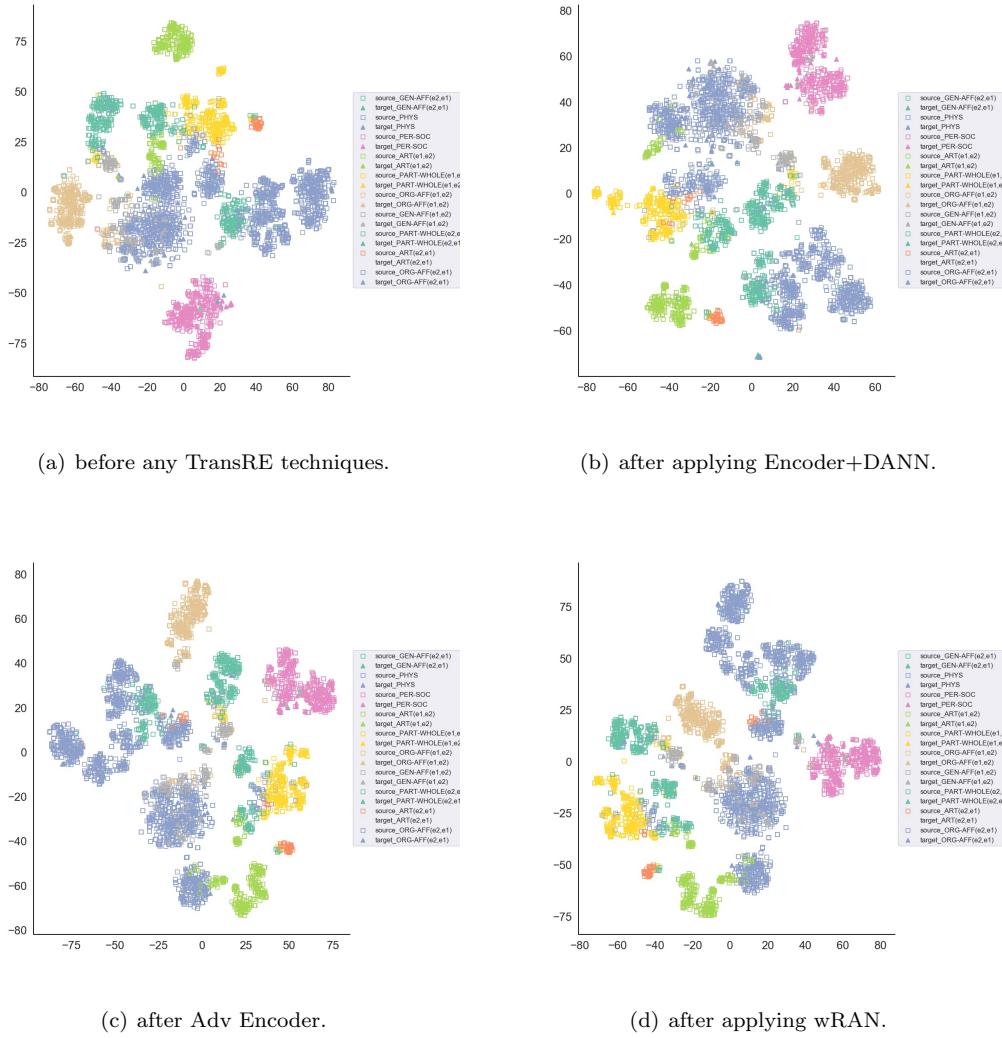
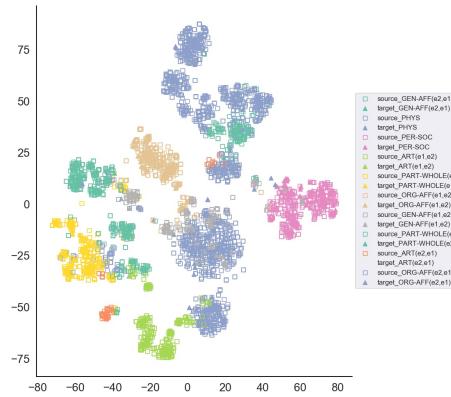
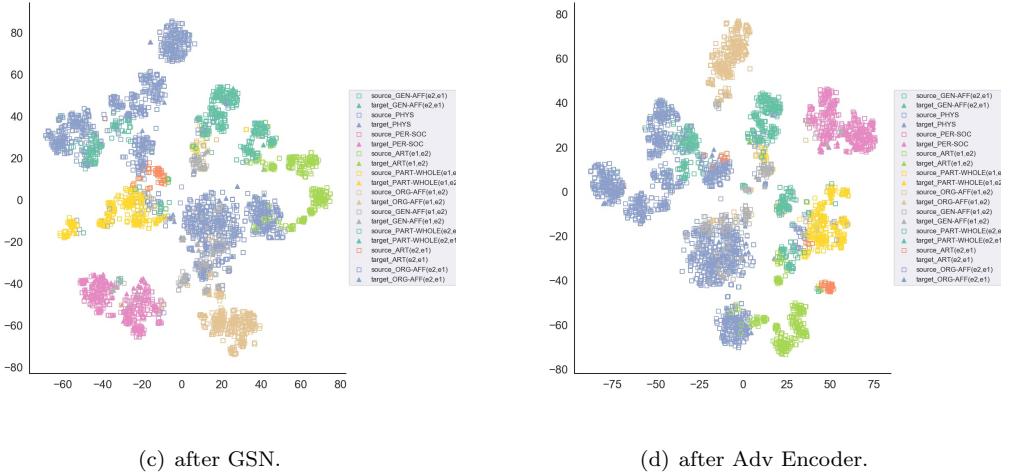
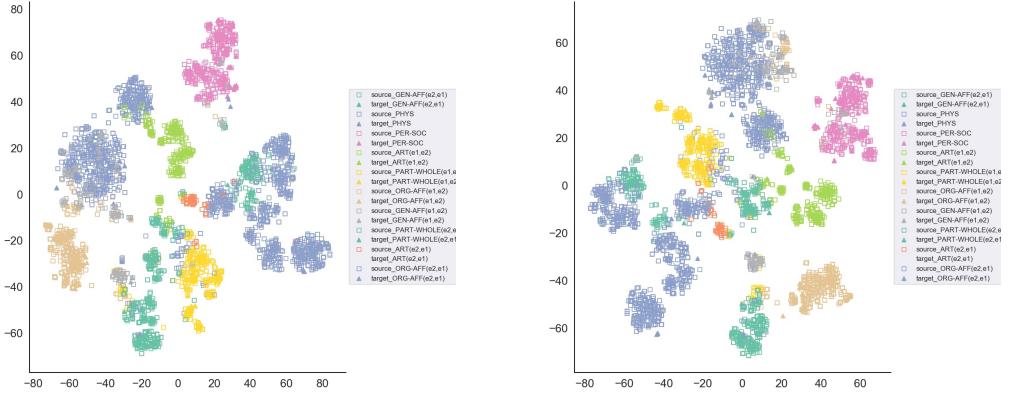
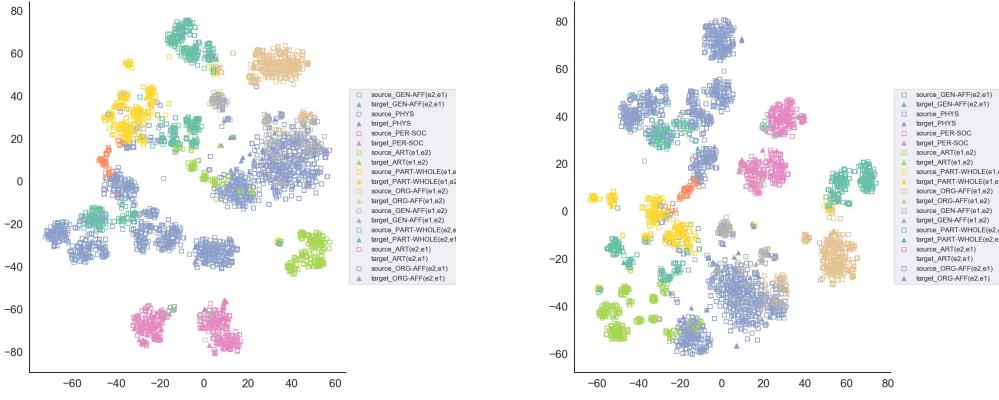


Figure 8: Visualization of latent representations of source and target Domains under the network framework with **CNN1** as sentence encoder and **inner.emb** as input word embeddings.



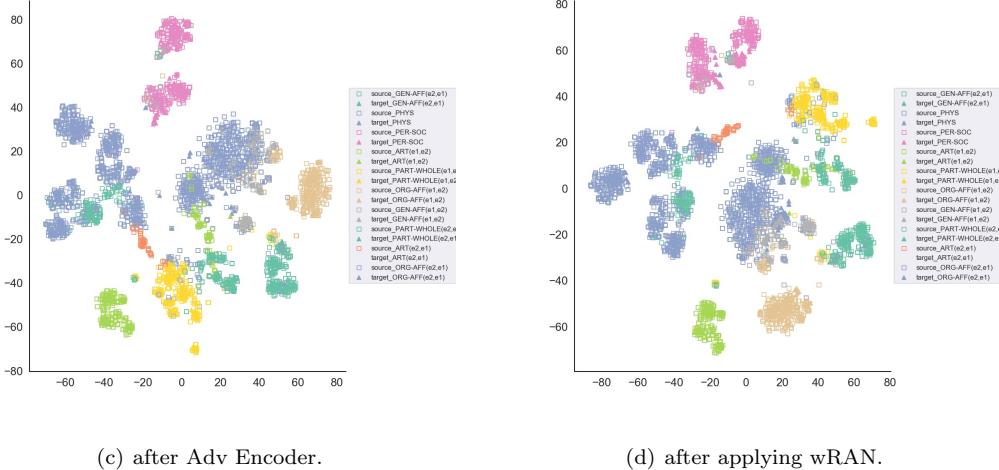
(e) after wRAN.

Figure 9: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **inner.emb** as input word embeddings.



(a) before any TransRE techniques.

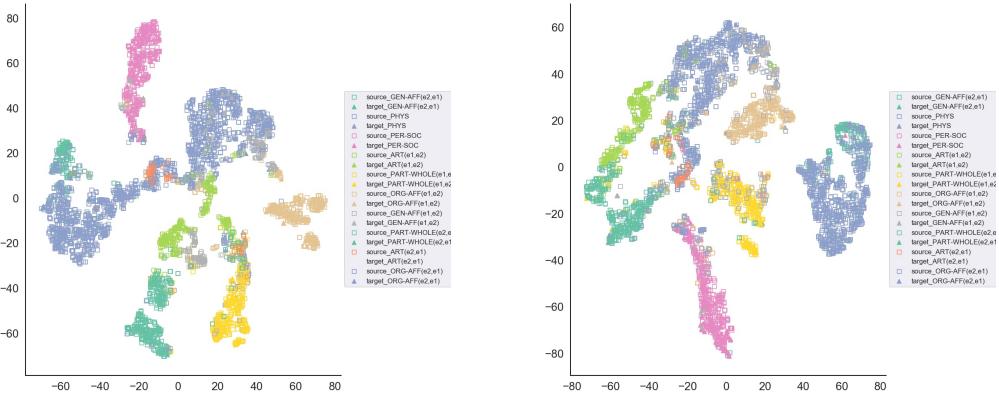
(b) after applying Encoder+DANN.



(c) after Adv Encoder.

(d) after applying wRAN.

Figure 10: Visualization of latent representations of source and target Domains under the network framework with **PCNN** as sentence encoder and **inner.emb** as input word embeddings.



(a) before any TransRE techniques.

(b) after applying Encoder+DANN.

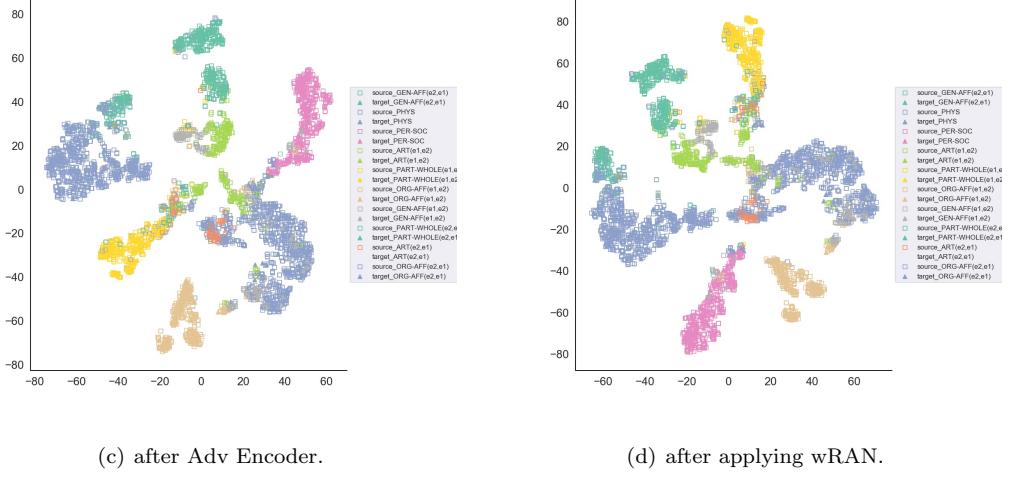


Figure 11: Visualization of latent representations of source and target Domains under the network framework with **BIGRU** as sentence encoder and **inner.emb** as input word embeddings.

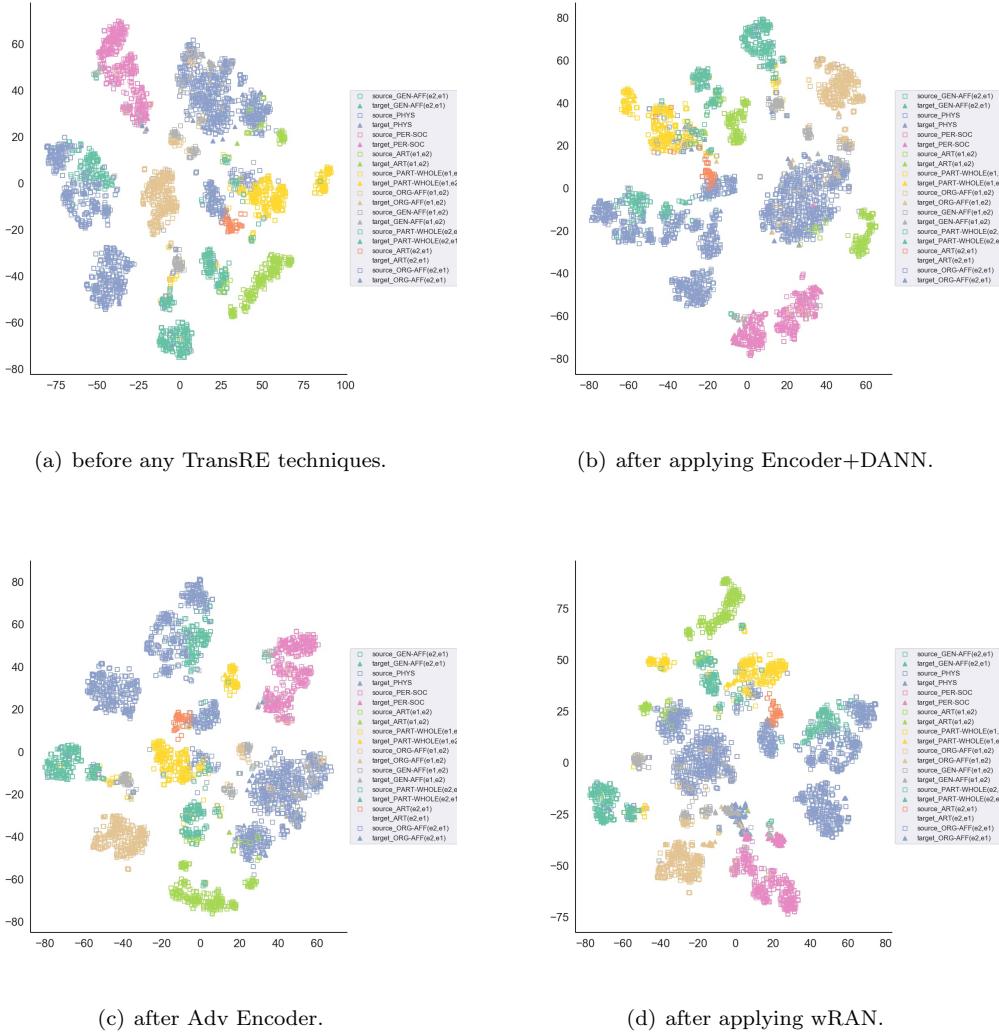


Figure 12: Visualization of latent representations of source and target Domains under the network framework with **BIGRU\_Att** as sentence encoder and **inner.emb** as input word embeddings.

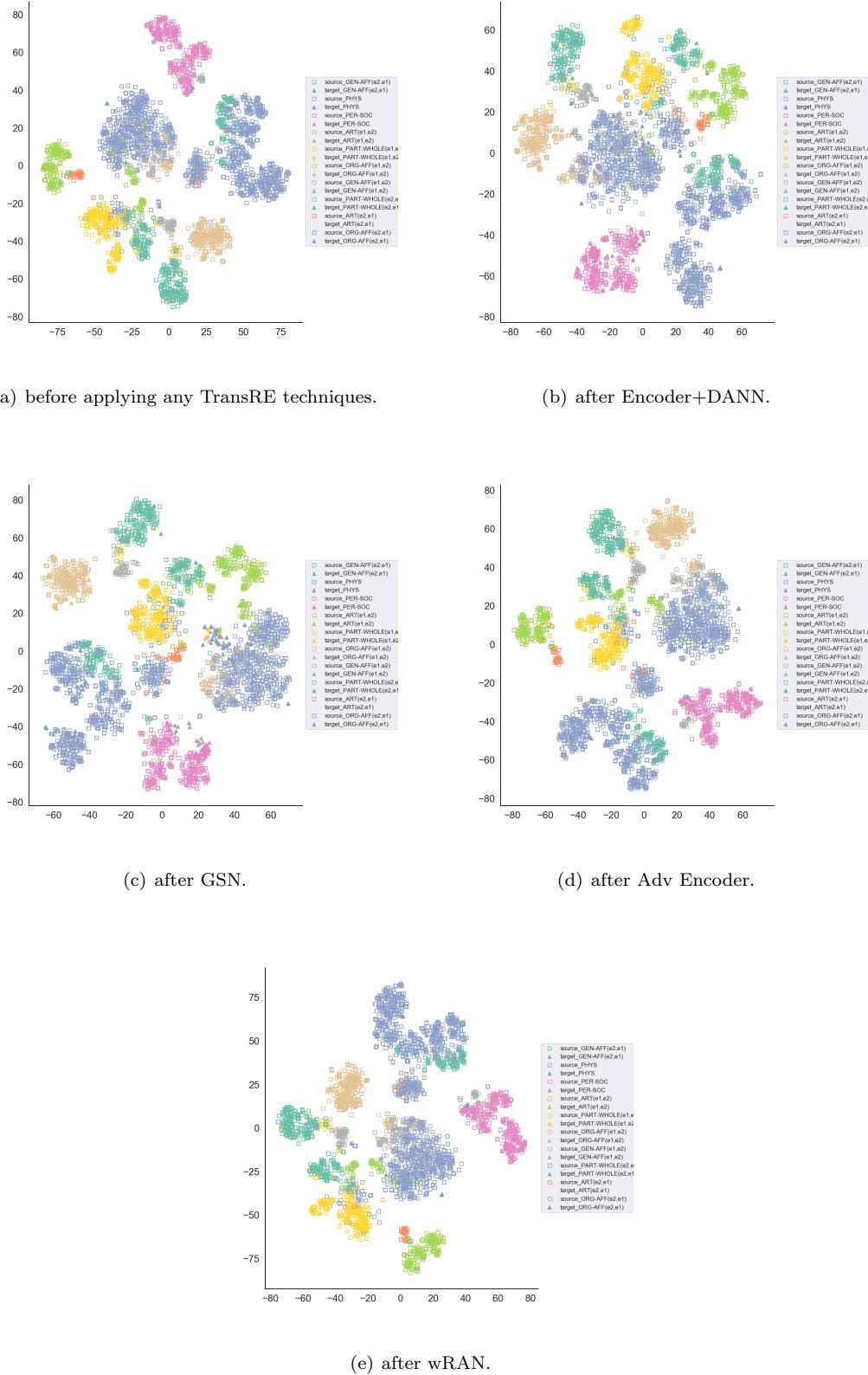


Figure 13: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **glove.6B.300d** as input word embeddings.

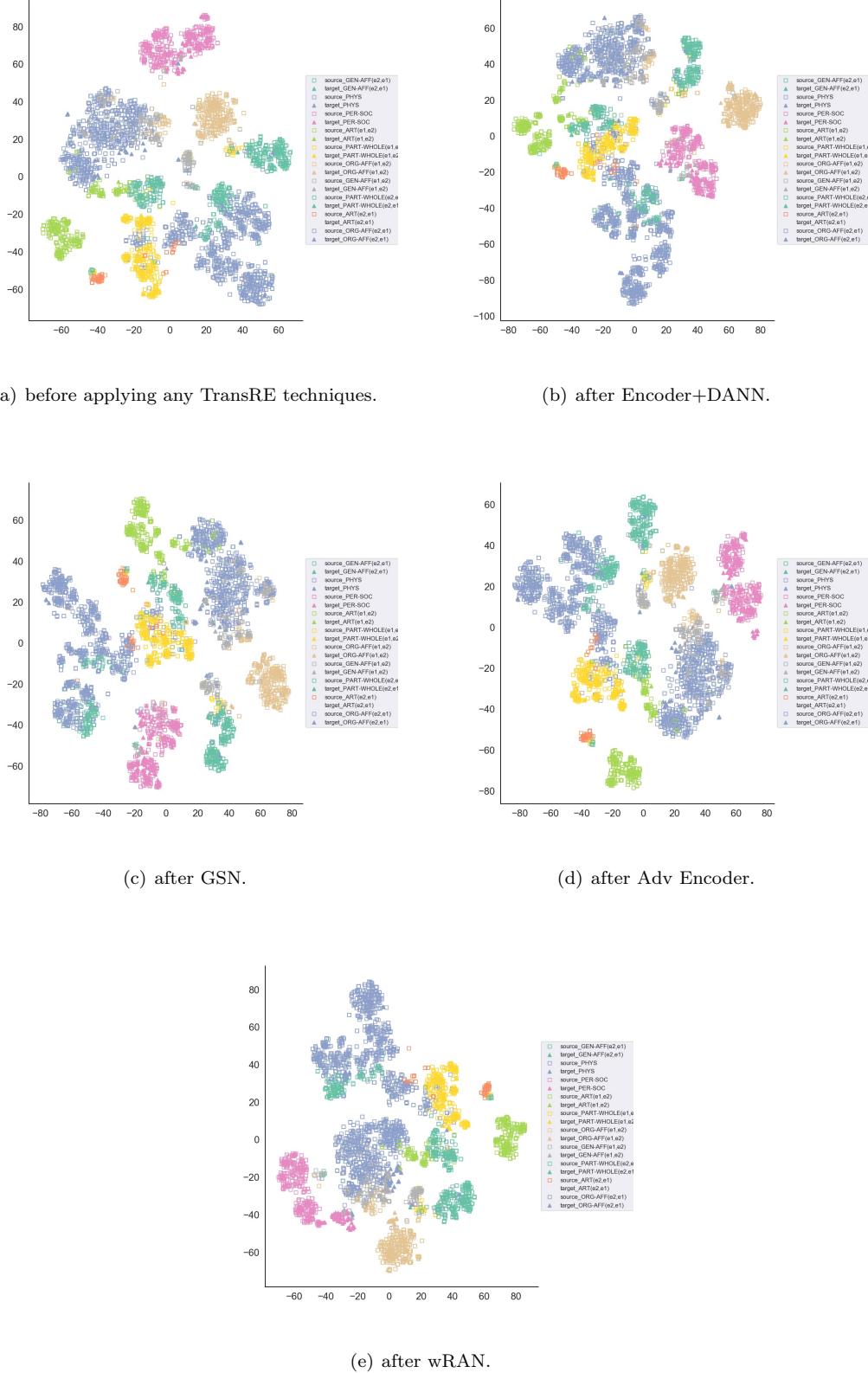


Figure 14: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **word2vec.google** as input word embeddings.

### A.3 One-step transfer task: nw&bn $\rightarrow$ wl.

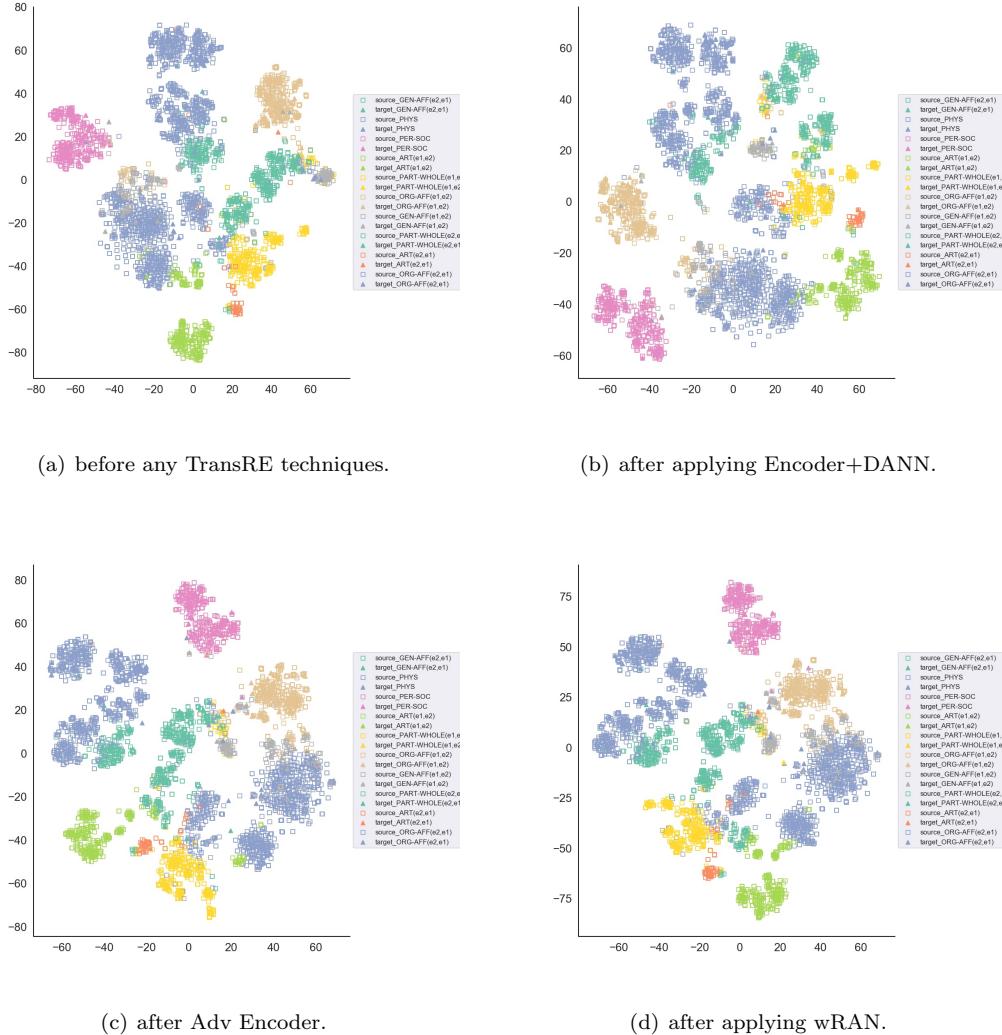


Figure 15: Visualization of latent representations of source and target Domains under the network framework with **CNN1** as sentence encoder and **inner.emb** as input word embeddings.

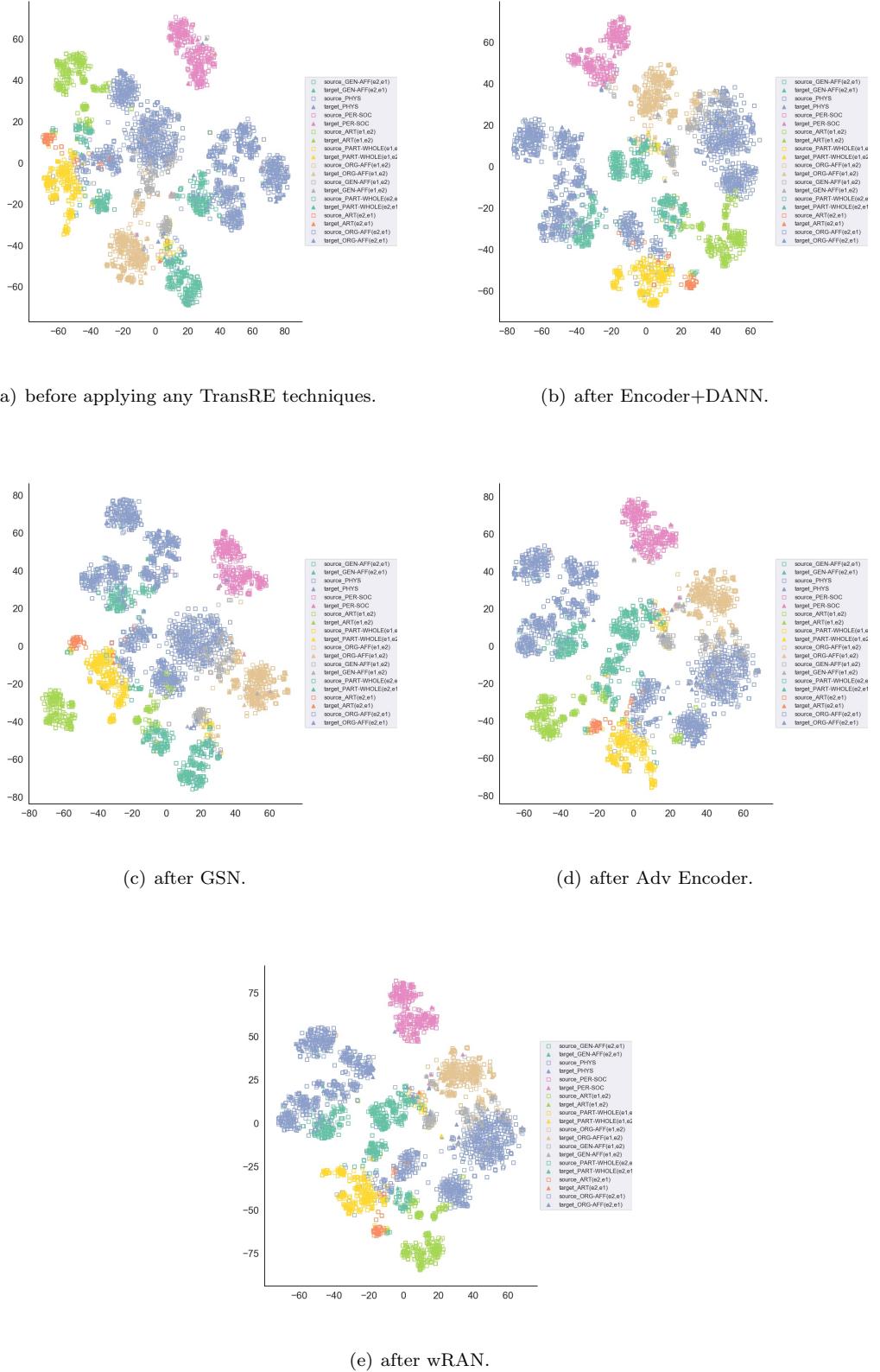


Figure 16: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **inner.emb** as input word embeddings.

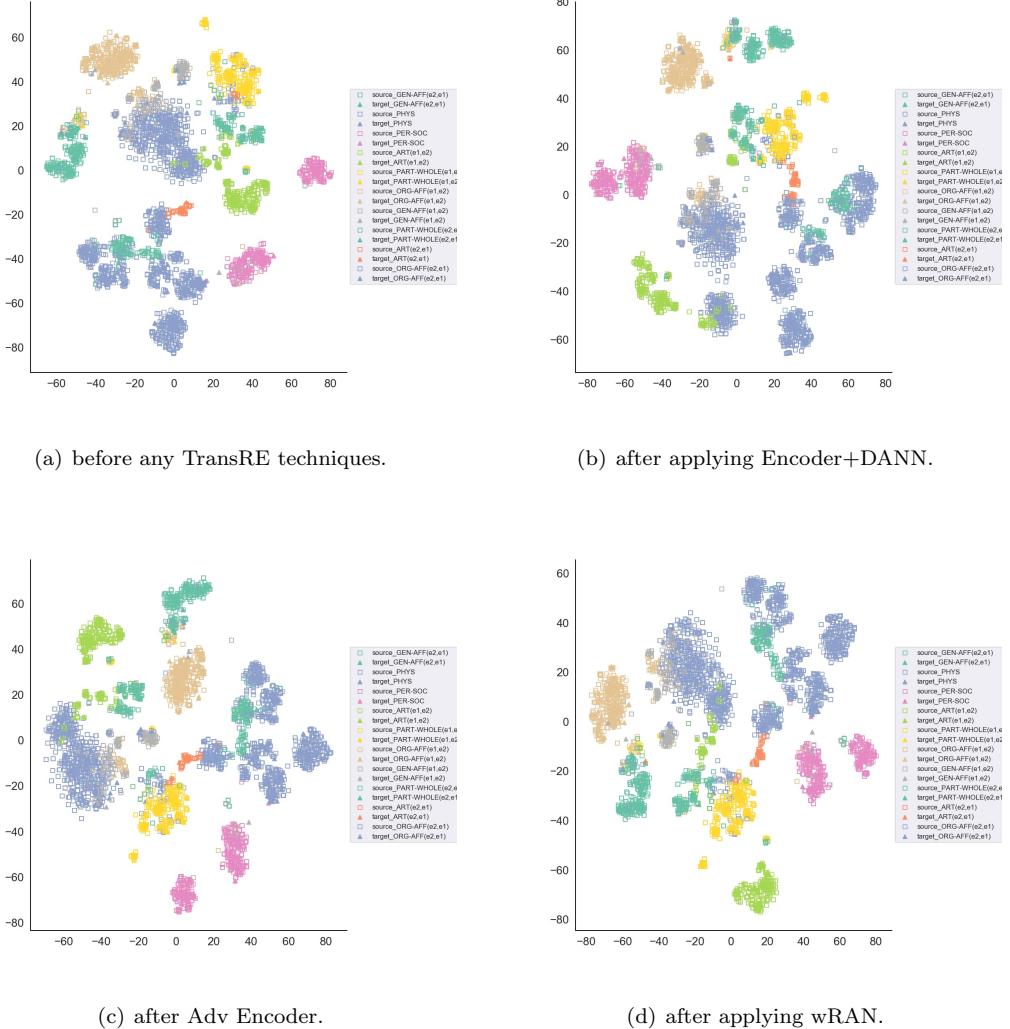
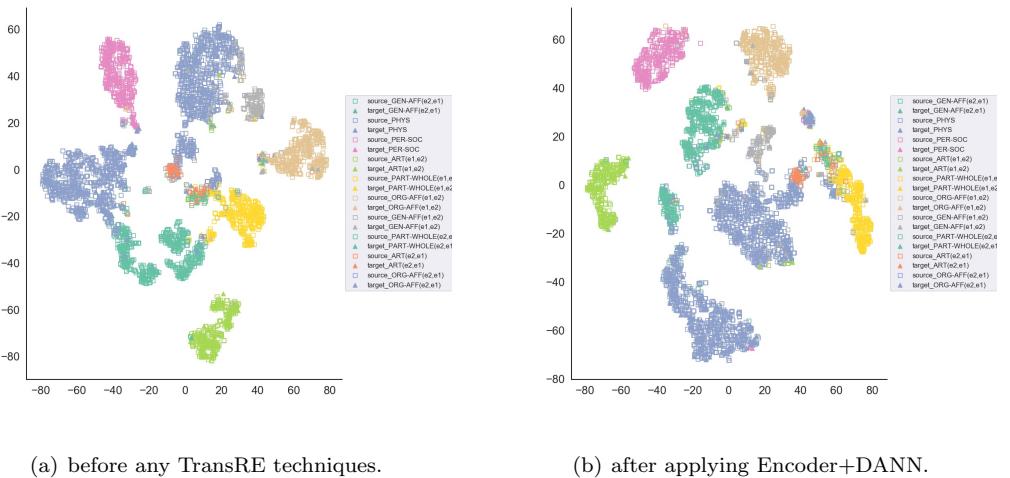


Figure 17: Visualization of latent representations of source and target Domains under the network framework with **PCNN** as sentence encoder and **inner.emb** as input word embeddings.



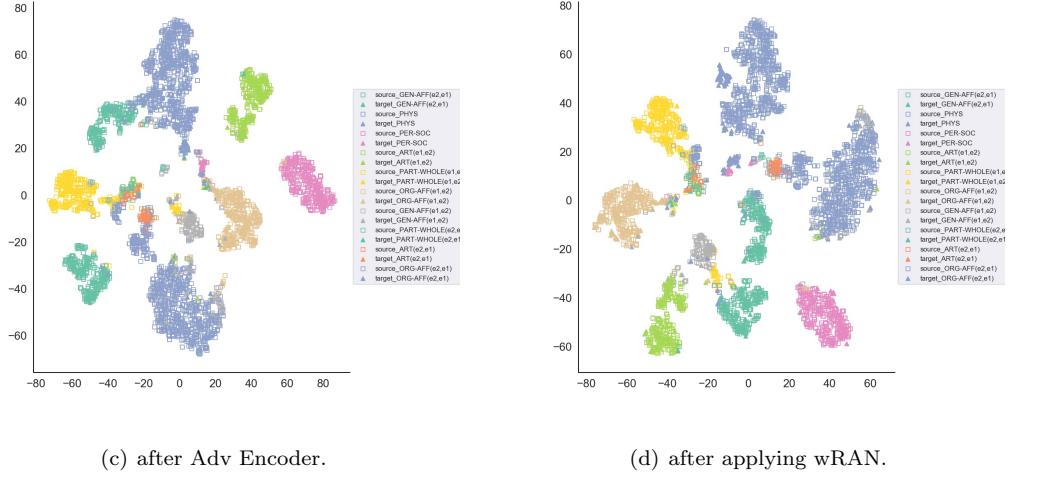


Figure 18: Visualization of latent representations of source and target Domains under the network framework with **BIGRU** as sentence encoder and **inner.emb** as input word embeddings.

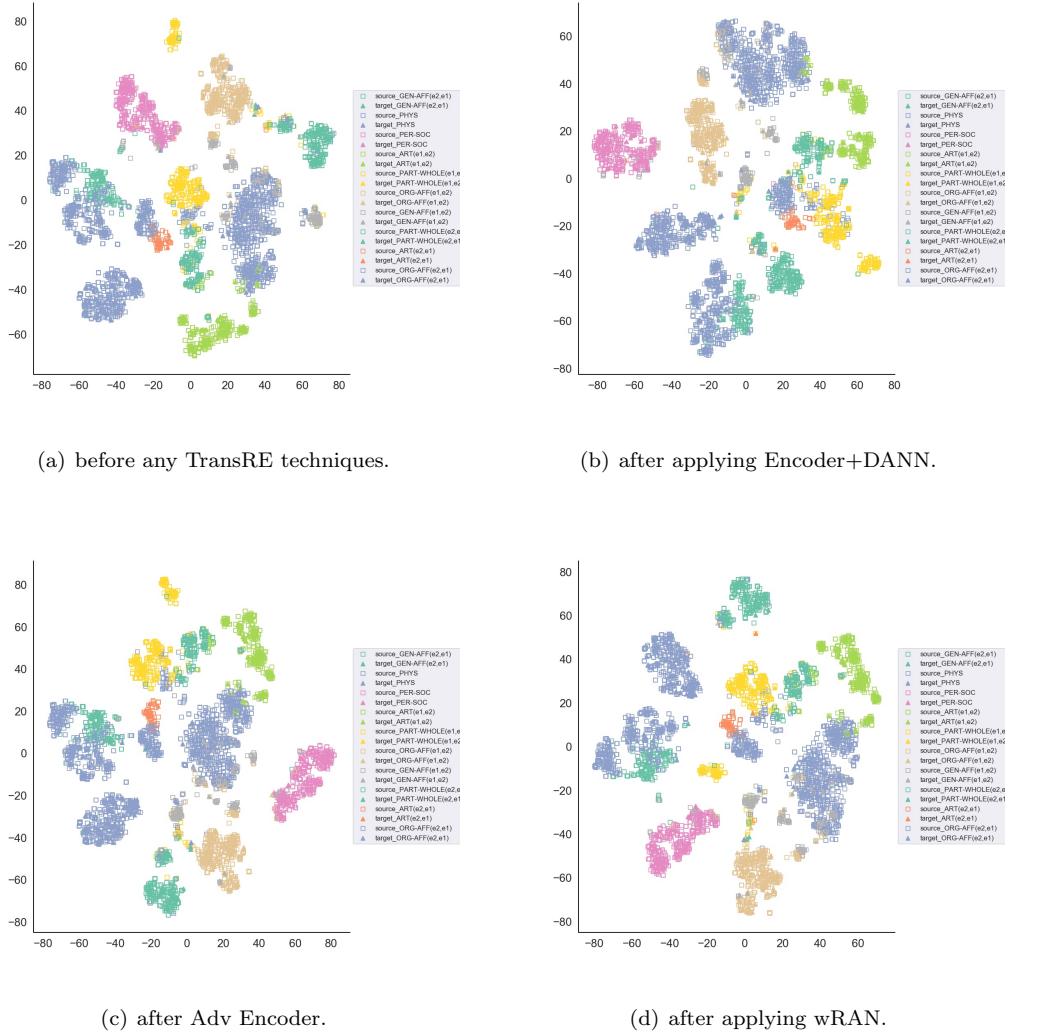


Figure 19: Visualization of latent representations of source and target Domains under the network framework with **BIGRU\_Att** as sentence encoder and **inner.emb** as input word embeddings.

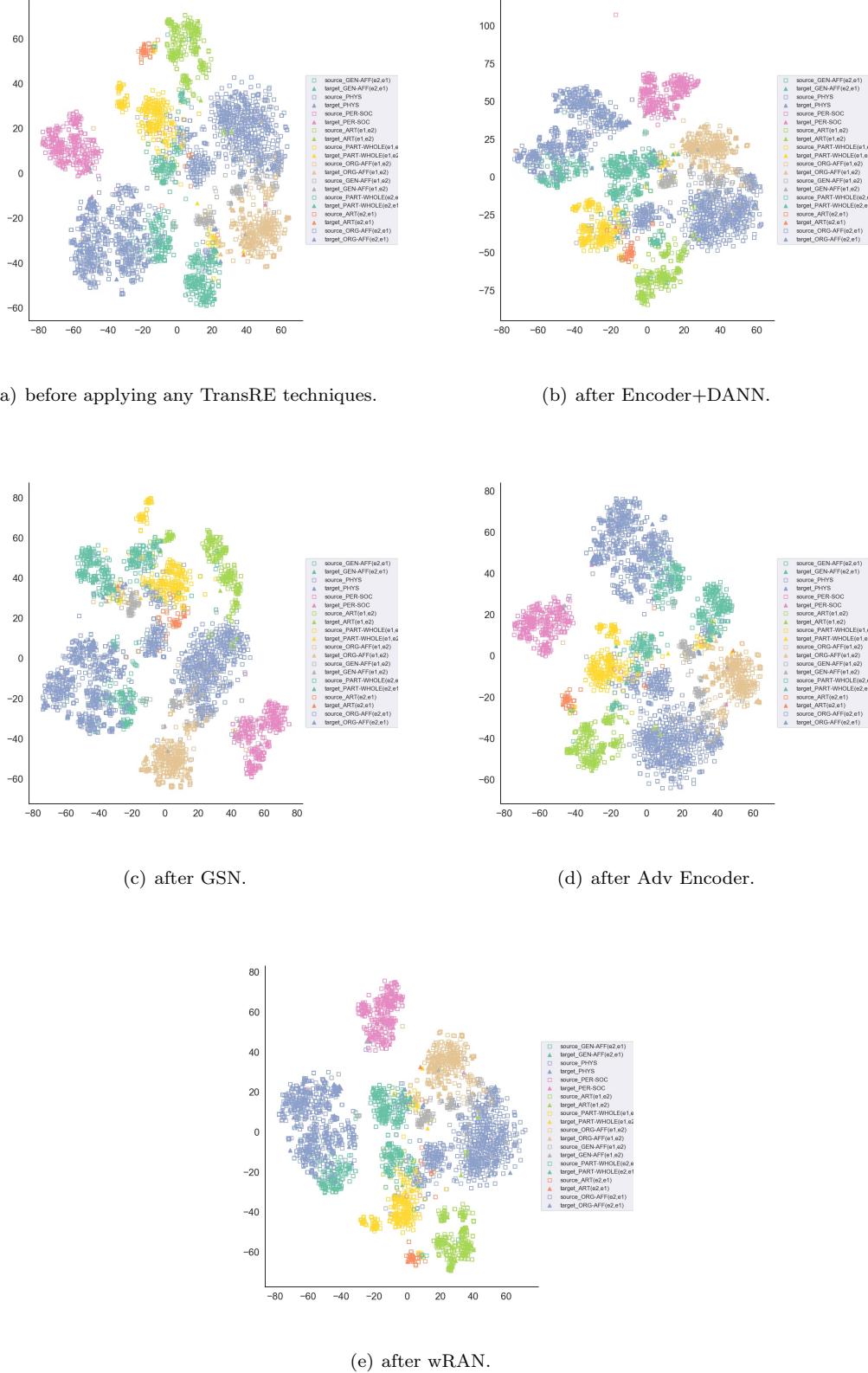


Figure 20: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **glove.6B.300d** as input word embeddings.

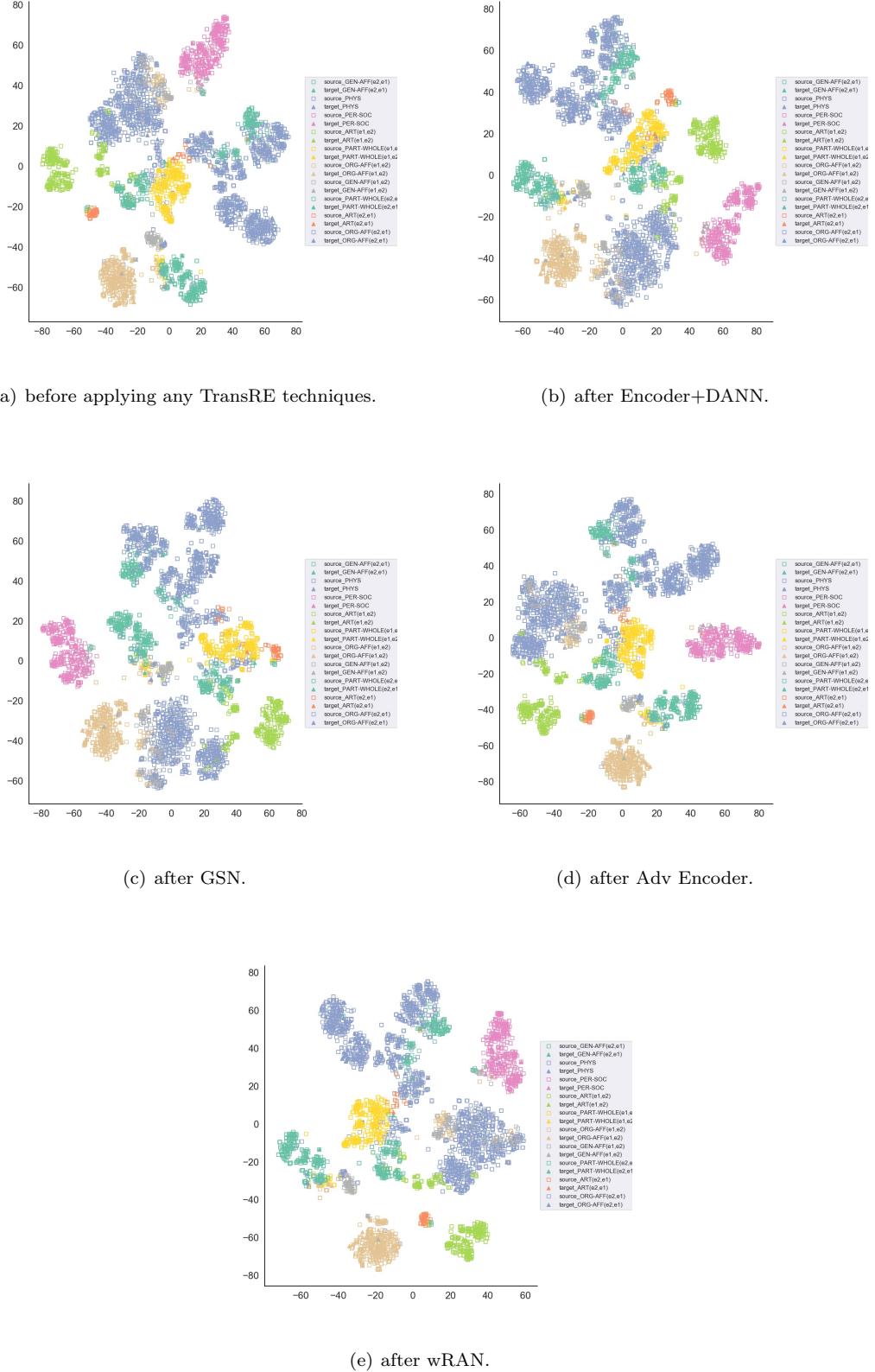


Figure 21: Visualization of latent representations of source and target Domains under the network framework with **CNN2** as sentence encoder and **word2vec.google** as input word embeddings.