

**WORDS CANNOT
DESCRIBE IT...
...**

Prepare to yawn uncontrollably while you read....

TAPORWARE TOOLS

VOYANT TOOLS

WATSON

NATURAL LANGUAGE UNDERSTANDING

5¢

Voyant Tools: Reveal Your Texts

FEATURING

whip
how
looks
yikes
squirt
true
ice
little
like
job
station
pho
y can



TAPORWARE TOOLS



VOYANT TOOLS

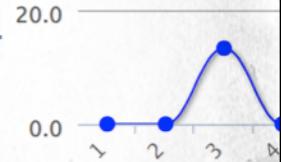
Watson™ Natural Language Understanding Label

WATSON NATURAL
LANGUAGE
UNDERSTANDING

FAMOUS BLACK RAY? DON'T WORRY, I WOULDN'T CHEAT.. ESPECIALLY THE ELECTRIC CHAIR! OH-OH! ONE CHANCE... IF I CAN FIELD THIS THING BEFORE IT EXPLODES! WHAT'S YOUR HURRY? CAN'T A LADY RETURN A COMPLIMENT? IT DID, BUT I HAD TO CLEAR ON OF POOR BEATTY'S MURDER! WELL, YOU MIGHT TAKE ME OUT, I'LL TRY TO SUBSTITUTE FOR PHANTOM LADY.POOR SUGAR GIRL! NOW I'VE GOT AN IDEA OF HOW MICKEY WAS KILLED! SOMEONE'S GOING TO PAY FOR THIS! BETTER START WITH THE STABLES AND LOCATE THAT JOCKEY! HAH! HERE COMES MY BROKEN-NOSED CHUM NOW! BY THE LOOK OF HIM THEY DISQUALIFIED HIM! I'LL JUST GIVE HIM ONE LAST SURPRISE! HERE I AM, KILLER, READY OR NOT! YOU WON'T GET THE CHANCE TO USE THAT TRICK WHIP ON ME! HUHH...WHO? MY LAST CHANCE AND MATCH...NOW IF THAT STRAW WILL ONLY BURN...OH-OH! I THOUGHT ALL OF YOU WERE UNDER CONTROL! WISH THIS WAS MY BLACK RAY, BUT YOU'LL HAVE TO SETTLE FOR A SQUIRT... SQUIRT! SEE YOU SOME MORE, BOYS I'VE GOT TO MAKE A QUICK CHANGE! SO AGAIN! AS I PROMISED LAST MONTH I'M BACK WITH ANOTHER CASE FROM POLICE FILES A TRUE CRIME

Word Trends

Relative Frequencies



Relative Segments black

Keywords in Context Left

Document: 1) PL_SPEECHES

+ ...A MINUTE, BOYS! DID

+ ...ALL OF YOU WERE U

Page 1 of 1

Words in Documents

Type Count

black 2



ONCE YOU HAVE TRANSCRIBED THE SPEECH BALLOON OR NARRATIVE TEXT OF A COMIC BOOK INTO INDIVIDUAL CHARACTERS OR CHARACTER-CLASSES, MANY THINGS BECOME POSSIBLE. WORD FREQUENCY CONCORDANCES CAN BE EXTRACTED AND COMPARED. IN PL#17, FOR EXAMPLE, SPEECH REGISTER IS USED TOGETHER WITH CLOTHING TO ESTABLISH SOCIAL STANDINGS -- CROOKS, POLICE AND TRAINMEN TEND TO USE CONTRACTIONS AND SLANG, FOR EXAMPLE, WHEREAS UPPER-CRUST ACTORS LIKE SANDRA KNIGHT, DON BORDEN AND A FEW OTHERS ESCHEW SLANG AND DRESS ELEGANTLY, BY THE LIGHTS OF THE TIMES. THERE COULD BE SUBTLE CLUES ABOUT GENDER BURIED IN THE SPEECH PATTERNS OF THE FIVE FEMALE CHARACTERS IN PL#17. GIVEN THE DATE OF COMPOSITION, THREE YEARS FOLLOWING WWII, THERE ARE LANGUAGE CHOICES THAT ARE IN KEEPING WITH A READERSHIP OF MILLIONS OF MEN WHO SURVIVED ACTIVE COMBAT IN THE EUROPEAN AND PACIFIC THEATERS.

A GROWTH INDUSTRY IN THE FIELDS OF COMPUTATIONAL LINGUISTIC ANALYSIS IS SENTIMENT AND EMOTIONAL ANALYSIS OF WORDS, WORD PHRASES AND LENGTHY SPEECH EXTRACTS. SENTIMENT ANALYSIS IS USED TO TAG SPEECH EXTRACTS AS EITHER POSITIVE OR NEGATIVE, WHEREAS EMOTIONAL INDEXING USUALLY USES "UNIVERSAL" EXPRESSIVE CATEGORIES LIKE JOY, ANGER, SADNESS, FEAR, AND DISGUST. COMIC BOOK LANGUAGE IS JUST AS SUSCEPTIBLE TO SENTIMENT AND EMOTIONAL ANALYSIS AS TWITTER FEEDS AND PRODUCT SUPPORT CALLS.

TAPORWARE (TEXT ANALYSIS PORTAL FOR RESEARCH) TOOLS WERE DEVELOPED WITH SUPPORT FROM THE CANADA FOUNDATION FOR INNOVATION AND THE MCMASTER UNIVERSITY FACULTY OF HUMANITIES. THE PROJECT HAS BEEN MOTHBALLED, BUT THE ONLINE SERVICE IS STILL AVAILABLE. ALTHOUGH TOOLS WERE DEVELOPED FOR WORKING DIRECTLY WITH HTML, XML AND PLAIN TEXT, WE RECOMMEND YOU WORK ONLY WITH THE PLAIN TEXT TOOLS ([HTTP://TAPORWARE.UALBERTA.CA/~TAPORWARE/TEXTTOOLS/](http://TAPORWARE.UALBERTA.CA/~TAPORWARE/TEXTTOOLS/)).

LIST WORDS: WILL GENERATE A LIST OF WORDS BY FREQUENCY OR ALPHABETICALLY. CAN BE USED WITH THE MODIFIED GLASGOW STOPWORDS LIST, REMOVING NUMBERS, DEFINITE ARTICLES, COMMON PREPOSITIONS, AND OTHERS THAT HAVE LITTLE DIAGNOSTIC VALUE FOR ESTABLISHING SPEECH USAGE PATTERNS.

Summary: There are 149 unique words other than those in the stop list, there are 215 words other than those in the stop list. There are 438 words in total including the stop words.

Words	Distribution	Counts
lady		9
phantom		9
don		6
girl		4
think		4
i'll		4
black		3
oh		3
betty		3
poor		3
change		3
horse		2

TAPORWARE

CONCORDANCE: MUST ENTER A WORD YOU ARE INTERESTED IN TRACKING. THE TOOL WILL GENERATE A LIST OF WORDS OR SENTENCES ON EITHER SIDE OF IT TO ENABLE VISUAL INSPECTION OF CONTEXT, HELPFUL IN ESTABLISHING WORD USAGE.

Summary: 3 entries found.

WOULD SHOW UP ! GET ME AWAY FROM THIS MOP !
BUT AT LEAST THIS GIVES ME A CHANCE TO CHANGE INTO
THE PHANTOM LADY ! AND ME WITH NO BLACK RAY !

TAPoRware Tool Parameter Summary

Tool Name	Find Text -- Concordance (Plain)
Date of use	Wed Aug 30 08:39:20 -0600 2017
Text source	SK_SPEECHES_PL17.txt
Pattern	me
Context	Word
Context length	5
Display format	HTML

CO-OCCURRENCE: MUST ENTER TWO WORDS OR PHRASES YOU ARE INTERESTED IN ANALYSING. THE TOOL WILL GENERATE A LIST OF WORDS OR SENTENCES ON EITHER SIDE OF IT TO ENABLE VISUAL INSPECTION OF CONTEXT, HELPFUL IN ESTABLISHING WORD USAGE.

4 co-occurrences found

COVER AS I THOUGHT ! GOT TO GET OUT OF HERE

CAVE-IN ! I'M TRAPPED ! GOT TO KEEP GOING FORWARD !

SOME MORE , BOYS I'VE GOT TO MAKE A QUICK CHANGE

DOES NOT PAY ! I'VE GOT TO GET BACK NOW AND

TAPoRware Tool Parameter Summary

Tool Name	Find Text -- Co-occurrence (Plain)
Date of use	Wed Aug 30 08:47:14 -0600 2017
Text source	PL_SPEECHES_PL17.txt
Primary pattern	got
Co-pattern	to
Context	Word
Context length	5
Display format	HTML

COLLOCATION: WILL GIVE YOU WORDS AND USAGE FREQUENCY OF THOSE LOCATED NEAR AN INPUT WORD OR PHRASE.



Summary: There are 17 unique words other than those in the stop list, there are 20 words other than those in the stop list. There are 37 words in total including the stop words.

Words	Counts
Files	3
Just	2
Discovered	1
Right	1
Case	1
Owned	1
Narrowed	1
True	1
Bye	1
Story	1
Search	1
Tan	1
Brain	1
Till	1

SUMMARIZER: GENERATES AT A GLANCE GENERAL STATISTICS FOR WORD OCCURRENCE, HIGH FREQUENCY WORDS, A CONCORDANCE LIST BASED ON THE TOP TEN OCCURRING WORDS, AND SENTENCES THAT CONTAIN TWO OR MORE HIGH-FREQUENCY OCCURRING WORDS.

General Statistics

Summary

General Statistics

Text Source: PL_SPEECHES_PL17.txt from your local drive

First non-empty paragraph:

HOPE I'M NOT TOO LATE TO SETTLE SOME CROOK'S HASH! BETTY! THEY'VE KILLED HER! AND DON!...WHAT'S THAT CARD? AT LEAST DON'S BREATHING! WHAT'S THIS? ACME PROTECTIVE ASSOCIATION! THE SAME CROOKS! NICE OF THEM TO PUT THEIR PHONE NUMBER DOWN HERE! TAKE IT EASY, CHUM, DON'T SPRAIN YOUR BRAIN! JUST CALL THE POLICE FOR ME! SO THIS IS THE STREET! AND DEAD END AT

High Frequency Words

List top 10 words not in the stop word list

Words	Counts
gang	6
got	6
evelyn	6
just	6
little	5
time	5
i've	4
chance	4

Concordance List

Concordance list

gang

THE GIRL WHO REMADE A GANG OF TWO BIT CROOKS INTO WE LOOK IN ON THE GANG EARLY IN 1937 HIS NEW WIFE TO HIS GANG.
A WEEK SHE HAD THE GANG WHIPPED INTO SHAPE EACH ONE BANK JOB EVELYN AND THE GANG LAID LOW FOR SEVERAL MONTHS
MOST DARING OF ALL THE GANG'S JOBS A FEW LATER THE OTHER MEMBER OF THE GANG WAS SOON CAUGHT AND GIVEN
got
TO GET OUT OF HERE GOT TO GET OUT OF HERE GOT TO KEEP GOING FORWARD GOT TO KEEP GOING FORWARD NOW I'VE GOT AN IDEA OF HOW MICKEY SOME MORE BOYS I'VE GOT TO MAKE A QUICK CHANGE THEY GOT AWAY WITHOUT LEAVING A CLUE I'VE GOT TO GET BACK NOW AND

Sentences that contain 2 or more high frequency words

Sentences that contain 2 or more high frequency words

JUST CALL THE POLICE FOR ME!

DIDN'T GET MUCH OF A CHANCE TO LOOK THINGS OVER, DID I?

NOW I'VE GOT AN IDEA OF HOW MICKEY WAS KILLED!

SEE YOU SOME MORE, BOYS I'VE GOT TO MAKE A QUICK CHANGE!

AS I PROMISED LAST MONTH I'M BACK WITH ANOTHER CASE FROM POLICE FILES, A TRUE CRIME STORY THIS TIME I'VE CHOSEN EVELYN ELLIS, THE

BETA TOOLS: LIST WORD PAIRS:
CREATES A LIST OF BIGRAMS FOR AN INPUT TEXT.

TAPOINWARE

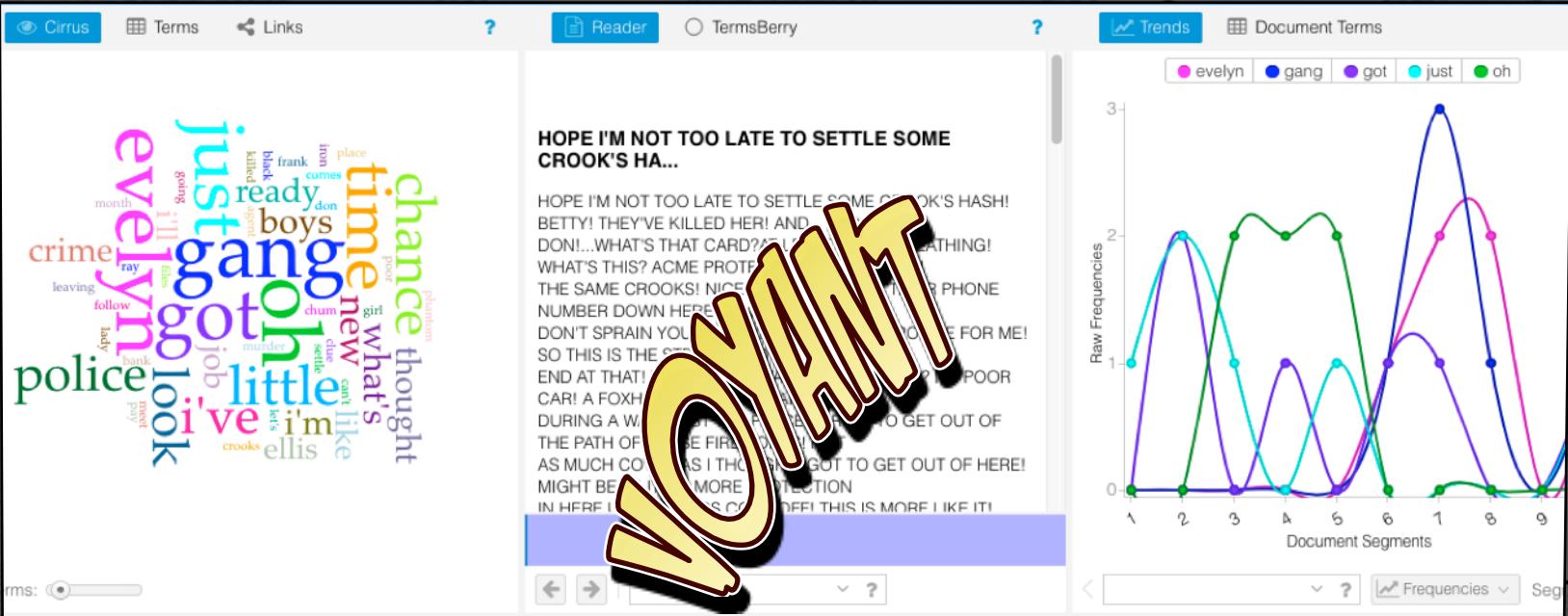
There are 464 word pairs contain at least one word that does not match the stop-word list you entered

Word pairs	Counts
the gang	5
this time	4
got to	4
i ve	4
evelyn was	3
oh oh	3
ve got	3
i ll	3
the police	3
phantom lady	2
crime story	2
to look	2

BETA TOOLS: WORD LIST COMPARISON WITH CONTROL

CORPUS: USING THE BROWN CORPUS, A DATABASE OF OVER A MILLION WORDS COMPILED IN 1961 AS A BASELINE MEASURE OF STANDARD AMERICAN SPEECH USAGE, THE TOOL WILL GENERATE A COMPARISON BETWEEN THE BROWN CORPUS AND THE COMIC BOOK TEXT, A HIGHLY USEFUL TOOL FOR EXPOSING THE "NORMALNESS" OF SPEECH PATTERNS AND IDIOMS. ALSO SUPPORTS A COMPARISON BETWEEN TWO SETS OF COMIC BOOK SPEECHES -- SO, FOR INSTANCE, ONE CAN COMPARE THE SPEECHES OF EVELYN ELLIS, CRIMINAL MASTERMIND, WITH PHANTOM LADY, OR PHANTOM LADY AND HER VANILLA IDENTITY, SANDRA KNIGHT.

Words	Counts	Relative Frequency	Brown Relative Freq.	Brown Counts	Ratio over Control	Distribution for source words	Distribution for Brown words
Common words							
just	6	0.016713092	0.001839973	872	9.083335462	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
got	6	0.016713092	0.001017049	482	16.432927027	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
gang	6	0.016713092	0.000046421	22	360.033002305	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 5%; background-color: blue; height: 10px;"></div>
evelyn	6	0.016713092	0.0000008440	4	1980.224170616	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
time	5	0.013927577	0.003367657	1596	4.135687512	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
little	5	0.013927577	0.001753460	831	7.942911159	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
look	4	0.011142061	0.000841914	399	13.234203256	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 50%; background-color: blue; height: 10px;"></div>
police	4	0.011142061	0.000327059	155	34.067434316	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 5%; background-color: blue; height: 10px;"></div>
chance	4	0.011142061	0.000276418	131	40.308738939	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 5%; background-color: blue; height: 10px;"></div>
i've	4	0.011142061	0.000263758	125	42.243499723	<div style="width: 100%; background-color: orange; height: 10px;"></div>	<div style="width: 5%; background-color: blue; height: 10px;"></div>
new	3	0.008356546	0.003449949	1635	2.422223053	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
like	3	0.008356546	0.002726199	1292	3.065273665	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
thought	3	0.008356546	0.001090901	517	7.660223980	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
i'm	3	0.008356546	0.000567606	269	14.722441271	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
job	3	0.008356546	0.000502194	238	16.640075349	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
i'll	3	0.008356546	0.000381921	181	21.880299853	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>
boys	3	0.008356546	0.000303849	144	27.502298839	<div style="width: 10%; background-color: orange; height: 10px;"></div>	<div style="width: 90%; background-color: blue; height: 10px;"></div>



Summary	Documents	Phrases	Contexts	Bubblelines	Correlations																												
This corpus has 1 document with 755 total words and 367 unique word forms. Created now.																																	
Vocabulary Density: 0.486																																	
Average Words Per Sentence: 9.9																																	
Most frequent words in the corpus: evelyn (6); gang (6); got (6); just (6); oh (6)																																	
<table border="1"> <thead> <tr> <th>Document</th> <th>Left</th> <th>Term</th> <th>Right</th> </tr> </thead> <tbody> <tr> <td>1) HOP...</td> <td>STORY, THIS TIME I'VE CHOSEN</td> <td>ev...</td> <td>ELLIS, THE GIRL WHO REMADE</td> </tr> <tr> <td>1) HOP...</td> <td>WIFE TO HIS GANG...LITTLE</td> <td>ev...</td> <td>RULED WITH AN IRON HAND</td> </tr> <tr> <td>1) HOP...</td> <td>CLUE AND SPLIT \$67,000.</td> <td>ev...</td> <td>WAS IN HER GLORY. IN</td> </tr> <tr> <td>1) HOP...</td> <td>CALIFORNIA..AFTER THE BANK J...</td> <td>ev...</td> <td>AND THE GANG LAID LOW</td> </tr> <tr> <td>1) HOP...</td> <td>WORMED OUT OF THE AGENT</td> <td>ev...</td> <td>WAS ABLE TO PLAN THE</td> </tr> <tr> <td>1) HOP...</td> <td>SOON CAUGHT AND GIVEN LIFE.</td> <td>ev...</td> <td>WAS SENTENCED TO FIFTY YE</td> </tr> </tbody> </table>						Document	Left	Term	Right	1) HOP...	STORY, THIS TIME I'VE CHOSEN	ev...	ELLIS, THE GIRL WHO REMADE	1) HOP...	WIFE TO HIS GANG...LITTLE	ev...	RULED WITH AN IRON HAND	1) HOP...	CLUE AND SPLIT \$67,000.	ev...	WAS IN HER GLORY. IN	1) HOP...	CALIFORNIA..AFTER THE BANK J...	ev...	AND THE GANG LAID LOW	1) HOP...	WORMED OUT OF THE AGENT	ev...	WAS ABLE TO PLAN THE	1) HOP...	SOON CAUGHT AND GIVEN LIFE.	ev...	WAS SENTENCED TO FIFTY YE
Document	Left	Term	Right																														
1) HOP...	STORY, THIS TIME I'VE CHOSEN	ev...	ELLIS, THE GIRL WHO REMADE																														
1) HOP...	WIFE TO HIS GANG...LITTLE	ev...	RULED WITH AN IRON HAND																														
1) HOP...	CLUE AND SPLIT \$67,000.	ev...	WAS IN HER GLORY. IN																														
1) HOP...	CALIFORNIA..AFTER THE BANK J...	ev...	AND THE GANG LAID LOW																														
1) HOP...	WORMED OUT OF THE AGENT	ev...	WAS ABLE TO PLAN THE																														
1) HOP...	SOON CAUGHT AND GIVEN LIFE.	ev...	WAS SENTENCED TO FIFTY YE																														

Summary	Documents	Phrases
This corpus has 1 document with 755 total words and 367 unique word forms. Created now.		
Vocabulary Density: 0.486		
Average Words Per Sentence: 9.9		
Most frequent words in the corpus: evelyn (6); gang (6); got (6); just (6); oh (6)		

CIRRUS (WORD CLOUD): GENERATES A WORD CLOUD THAT CAN USE THE TAPORWARE STOPWORD LIST. CAN BE EXPORTED.

WORDS IN THE ENTIRE CORPUS: SIMILAR TO TAPORWARE LIST WORDS, WITH OPTION TO USE STOPWORD LIST. CLICKING ON A WORD HIGHLIGHTS ITS USAGE IN THE COMPLETE SPEECH EXTRACT AND GENERATES A "KEYWORDS IN CONTEXT" VIEW, WITH STATS.

CORPUS: WORD STATISTICS, WITH A USEFUL DENSITY INDEX (HIGHER THE DENSITY, THE RICHER THE VOCABULARY).

WORDS IN DOCUMENT: LIST OF WORDS WITH RELATIVE FREQUENCY. CLICKING ON ONE CREATES THE EQUIVALENT OF THE TAPORWARE CONCORDANCE (CONTEXT 5 TO 25 WORDS), AND ALSO HIGHLIGHTS THE WORD IN THE COMPLETE SPEECH EXTRACT.

VOYANT: [HTTPS://VOYANT-TOOLS.ORG/](https://voyant-tools.org/)

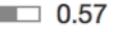
[Sentiment](#)[Emotion](#)[Keywords](#)[Entities](#)[Categories](#)[Concepts](#)[Semantic Roles](#)

Analyze the overall emotion and the targeted emotion of the content.

[JSON](#)

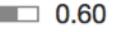
Overall Emotion

Joy  0.53

Anger  0.57

Disgust  0.52

Sadness  0.18

Fear  0.60



[HTTPS://NATURAL-LANGUAGE-UNDERSTANDING-DEMO.MYBLUEMIX.NET/](https://natural-language-understanding-demo.mybluemix.net/)

[Sentiment](#)[Emotion](#)[Keywords](#)[Entities](#)[Categories](#)[Concept](#)[Semantic Roles](#)

Review the overall sentiment and targeted sentiment of the content.

[JSON](#)

Overall Sentiment

Negative  -0.01

IBM WATSON NATURAL LANGUAGE UNDERSTANDING:
SENTIMENT ANALYSIS ATTEMPTS TO DETERMINE THE
EMOTIONAL POLARITY OF A TEXT STRING: “I LOVE TEI/
CBML!” (POSITIVE) “IT’S FOUR O’CLOCK” (NEUTRAL) “USING
IBM WATSON FOR COMIC BOOK ANALYSIS IS
RIDICULOUS” (NEGATIVE). EMOTION CLASSIFICATION USES
MACHINE INTELLIGENCE TO ASSIGN A NUMERIC VALUE TO A
PANEL OF EMOTIONAL STATES, IN THE CASE OF WATSON, JOY,
ANGER, FEAR SADNESS, DISGUST.

TO USE THIS WATSON SERVICE, SIMPLY COPY AND PASTE THE
PLAIN-TEXT OF A COMIC BOOK CHARACTER OR CLASS OF
CHARACTERS INTO THE DEMO, PRESS “ANALYZE” AND THEN
EXAMINE THE SENTIMENT AND EMOTION ANALYSIS OUTPUTS.



Attribution
CC BY

[HTTPS://CREATIVECOMMONS.ORG/LICENSES/BY/4.0/](https://creativecommons.org/licenses/by/4.0/)