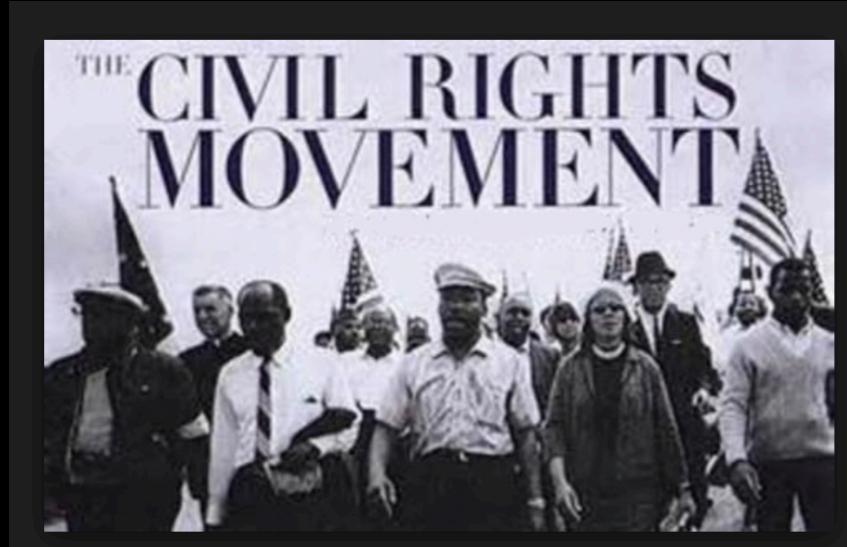


# 1960s-early 1970s America



civil rights movement



vietnam war



assassination of Dr. King



J.F. Kennedy assassination



anti war protests



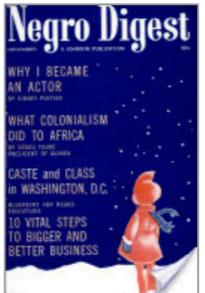
black power and  
black arts movement

# Text data from two leading African American magazines of the era (monthly issues)

## Negro Digest (1961-1970) Black World (1970-1976)



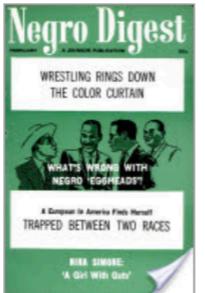
[Nov 1961](#)



[Dec 1961](#)



[Jan 1962](#)

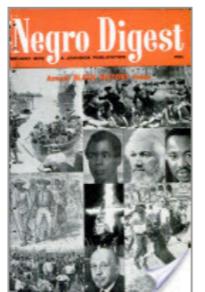


[Feb 1962](#)

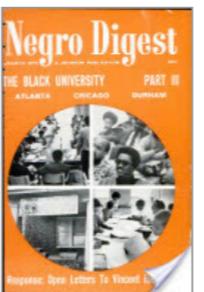
.....



[Jan 1970](#)



[Feb 1970](#)



[Mar 1970](#)



[Apr 1970](#)



[May 1970](#)



[Jun 1970](#)

.....

## Ebony (for period 1961-1976) : Ebony is still active



[Jan 1961](#)



[Feb 1961](#)



[Mar 1961](#)



[Apr 1961](#)



[May 1961](#)



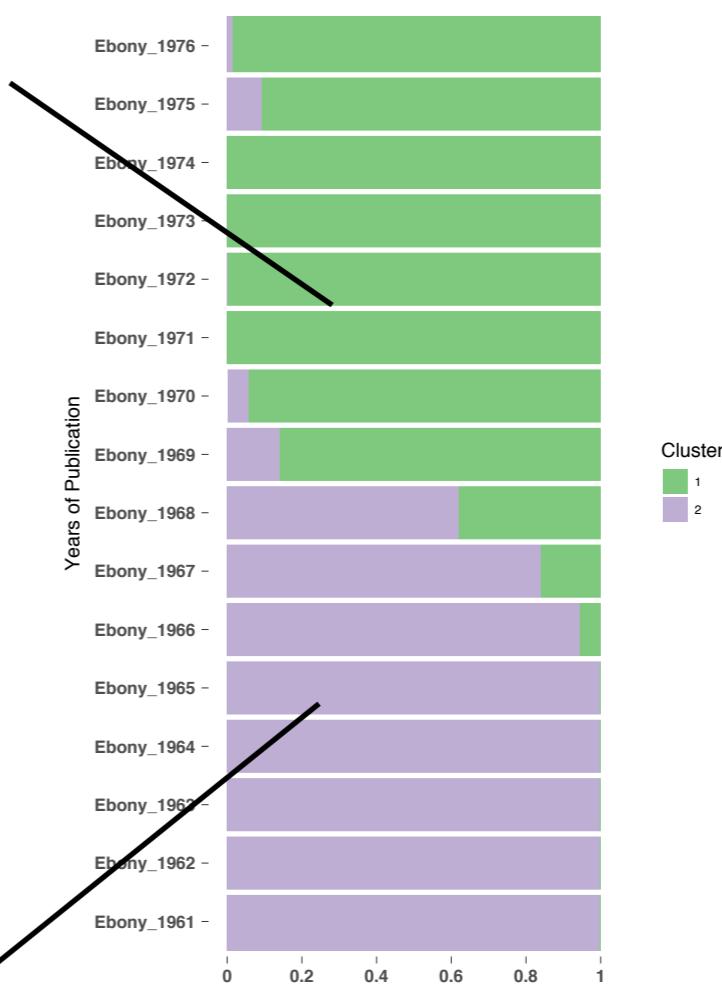
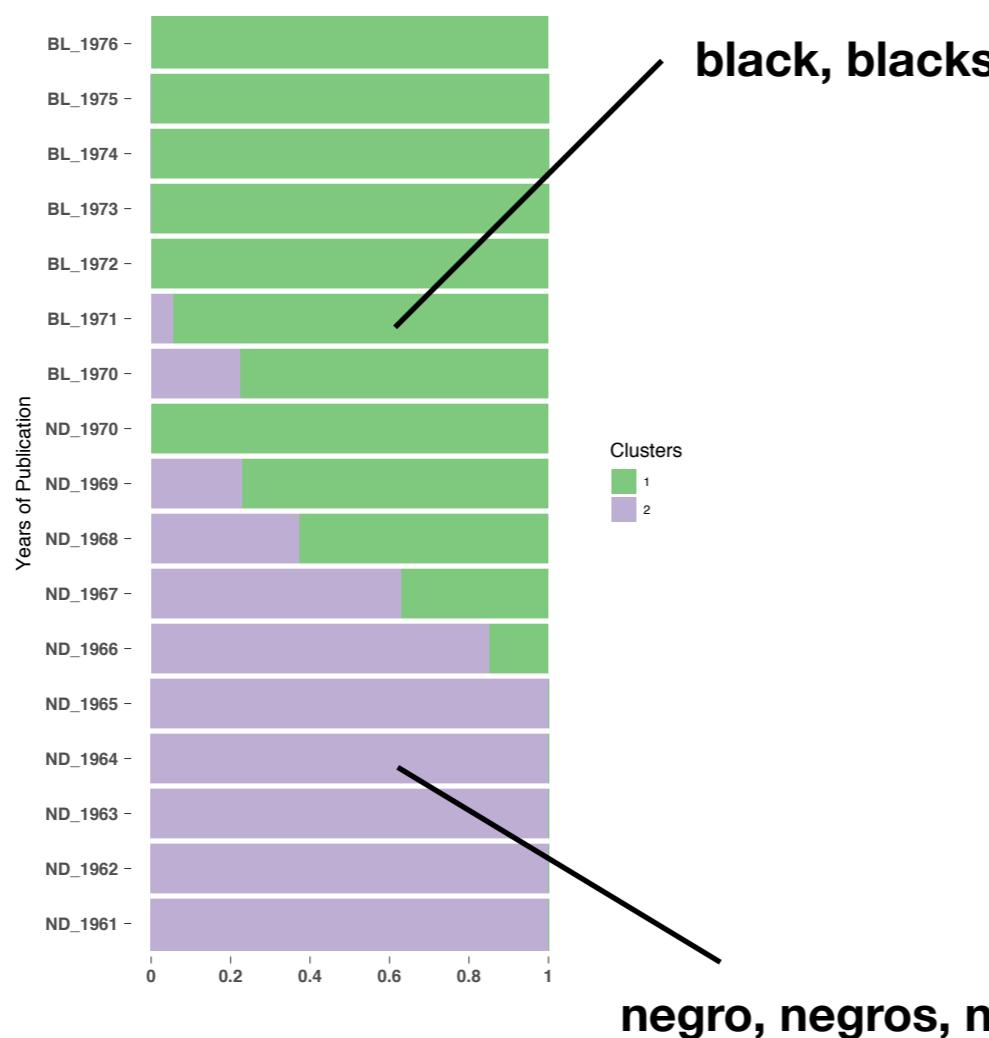
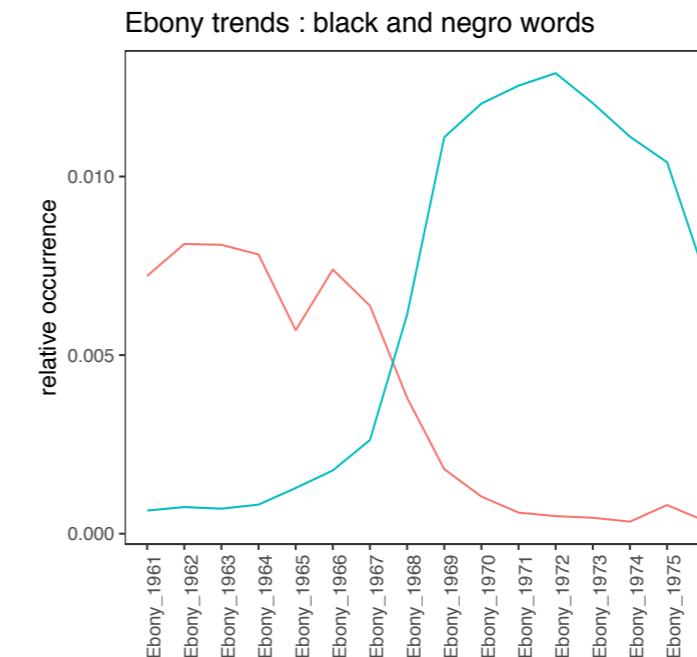
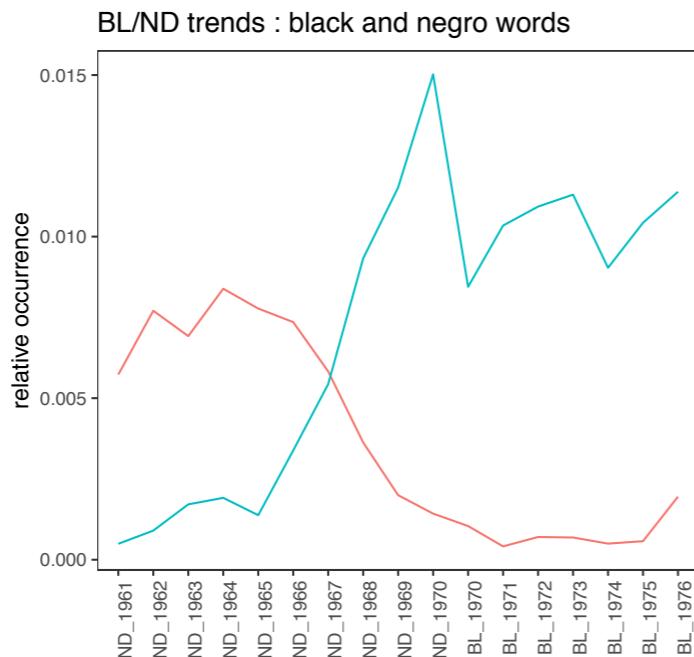
[Jun 1961](#)

.....

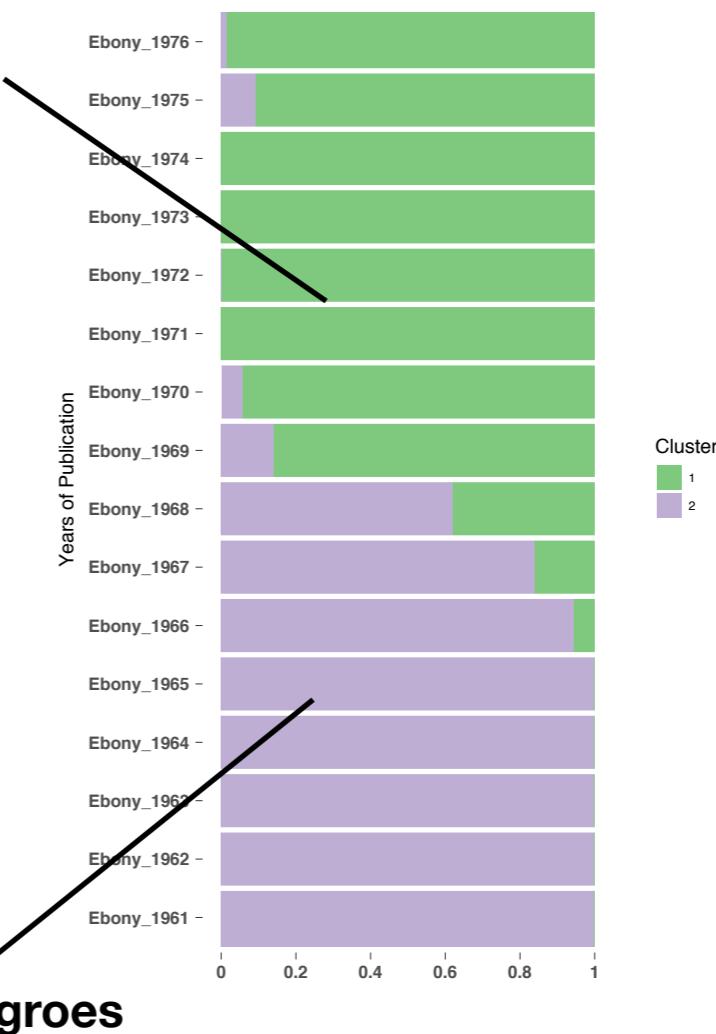
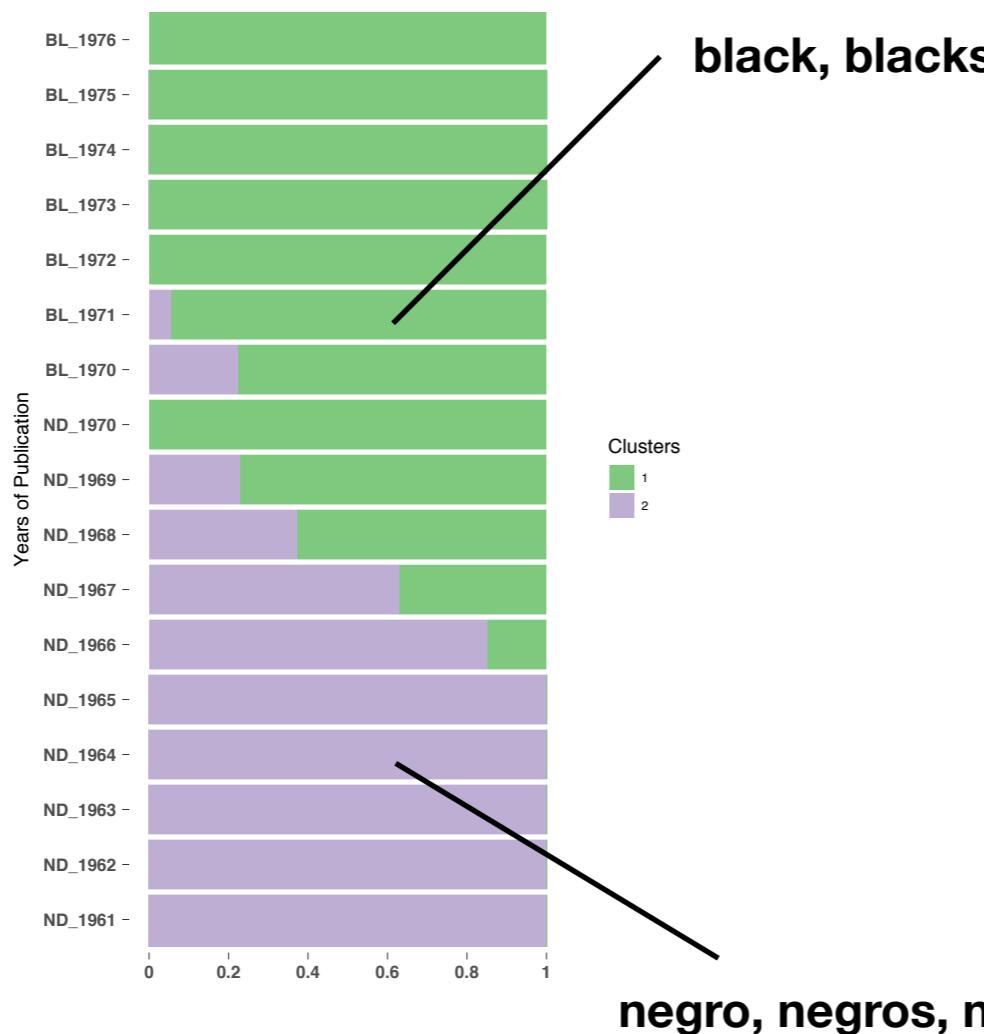
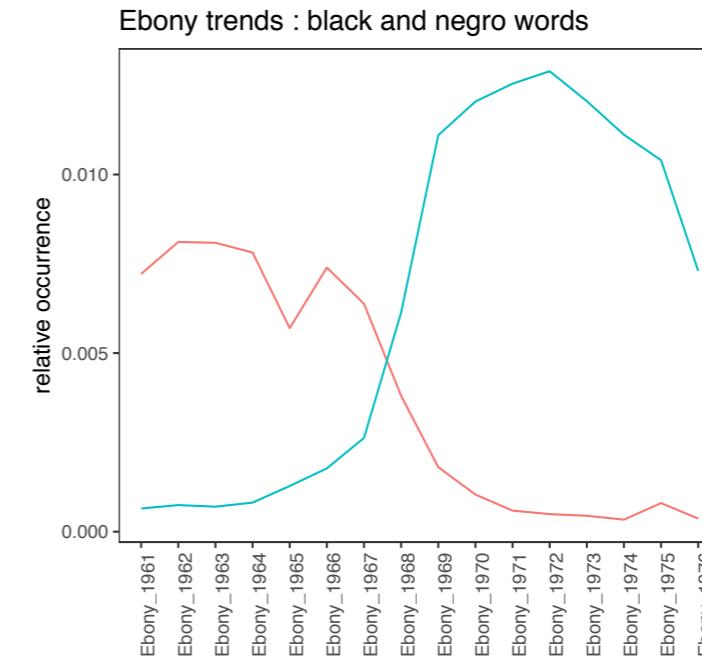
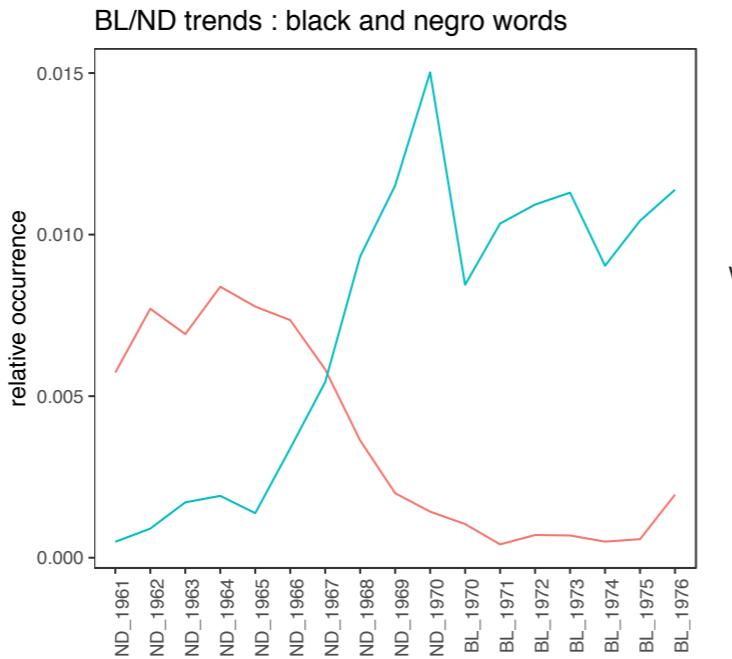
**Word frequency  
structure across years**

**(Topic models)**

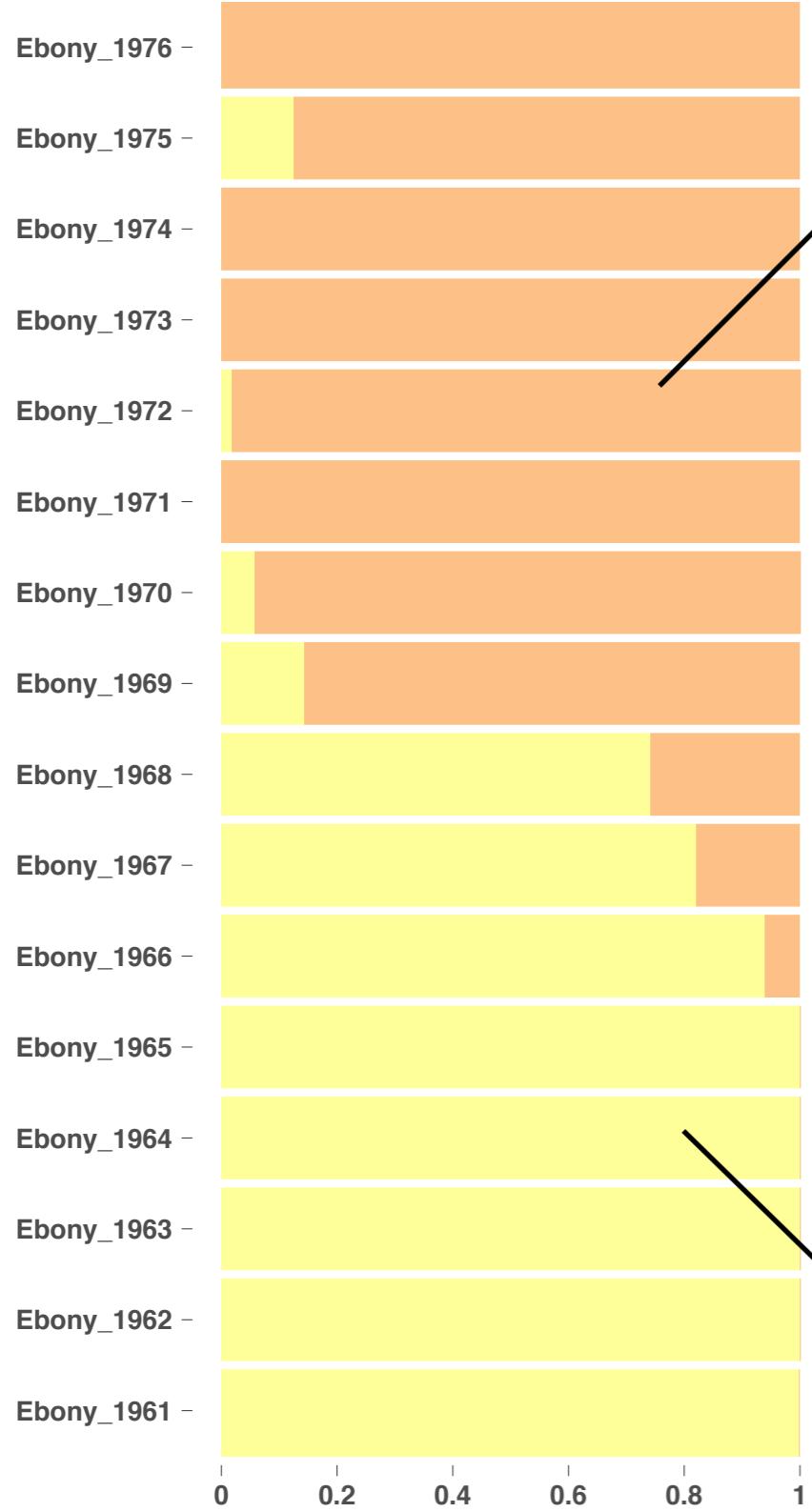
# Transition from negro to black



# Transition from negro to black



We remove these words and look at the structure again .....



*watergate, pollard, poussaint, cicely,  
blackowned,  
liberation (12), black\_panther (23),  
panthers (50)*

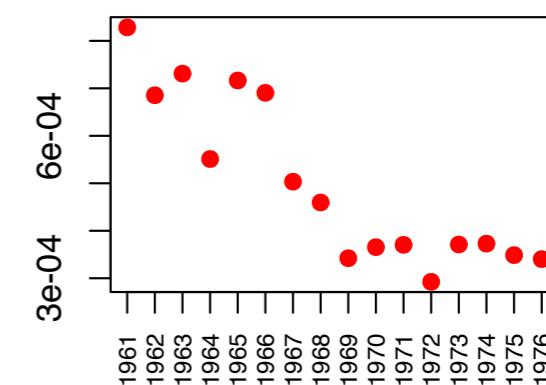
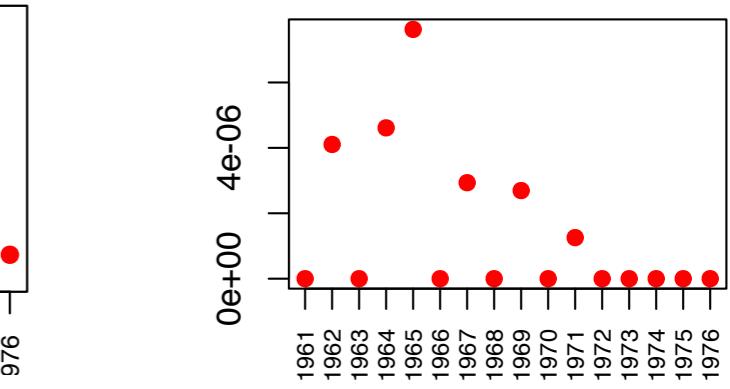
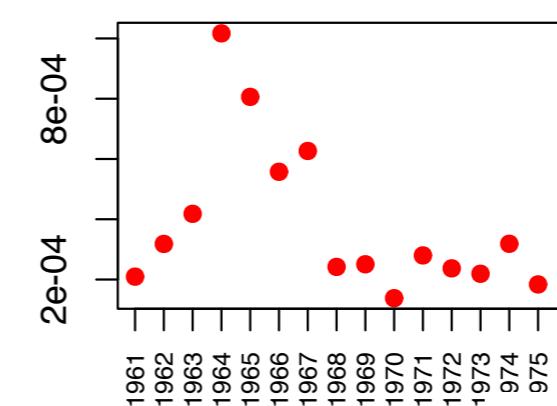
**civil rights**

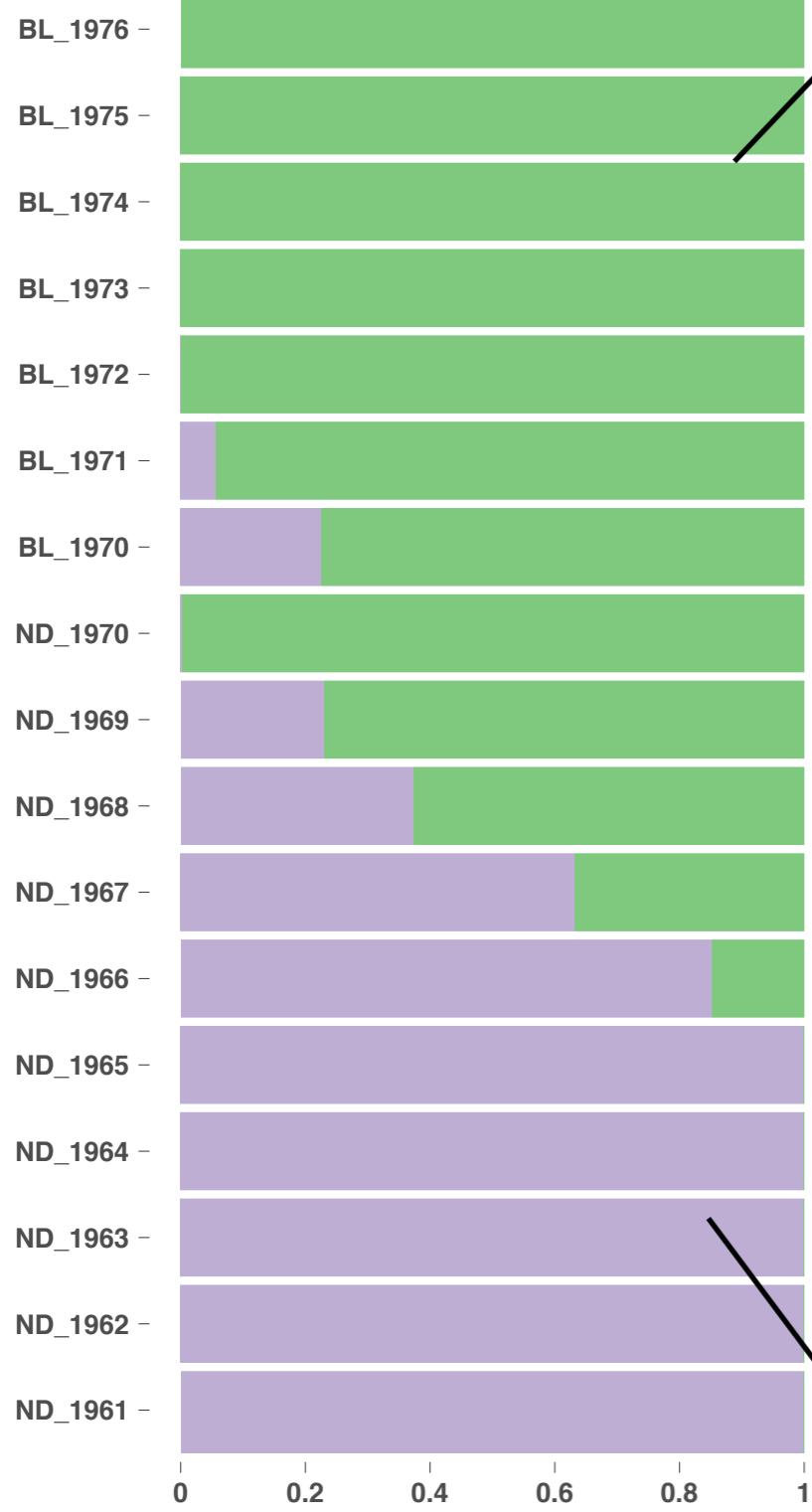
**black panther**

**righters**

**race**

**lennie (1), barrows (2), blodget (3),  
astronaut (4),  
whitmore (5), civil\_rights (21),  
agitator (46), race (49)**

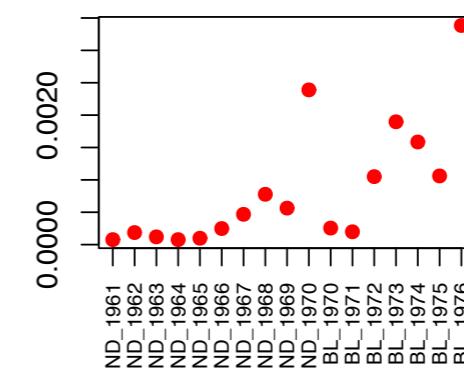




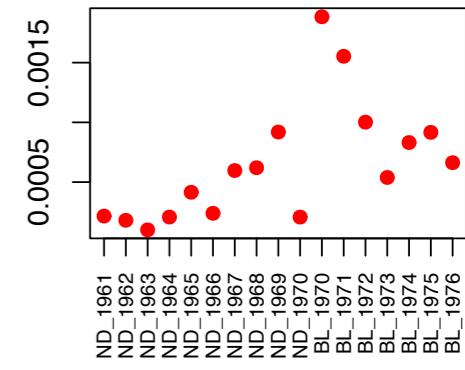
theater, tanzania, liberation,  
watergate, broadside,  
afroamerican , black Panthers  
(24), poetry (26), bibliography  
(38), literature (39), sonnet (41),  
drama (44), poets (49)

chenault, civil\_rights, joey, lennie,  
segregation, righters (21), colored  
(22), discrimination (41)

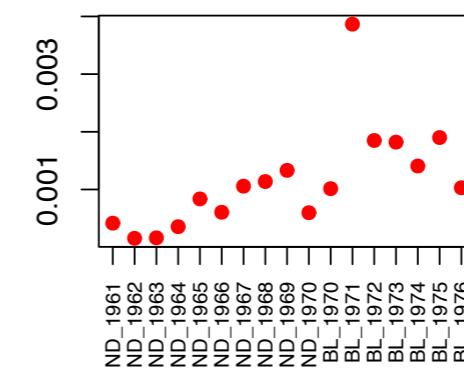
drama



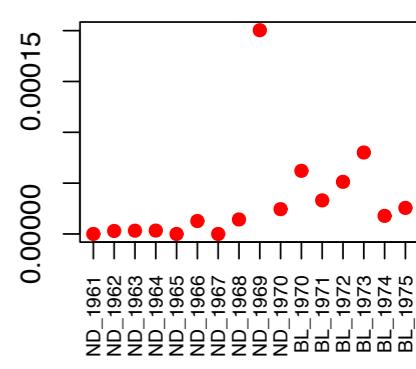
literature



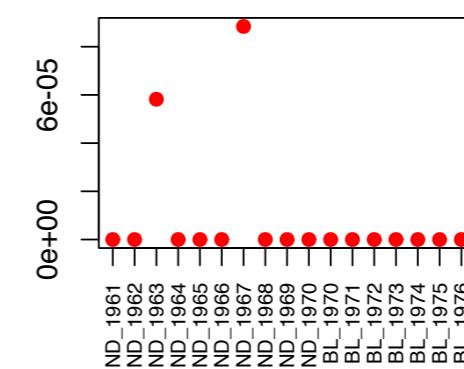
poetry



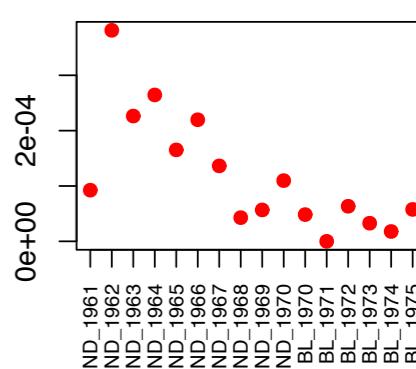
black panther



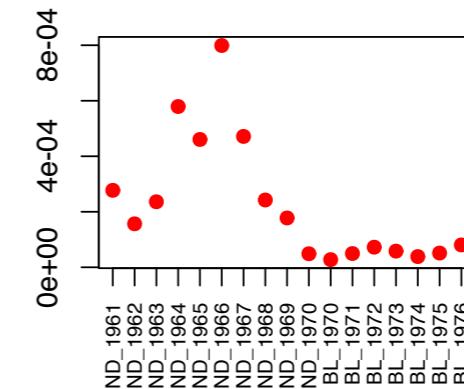
righters



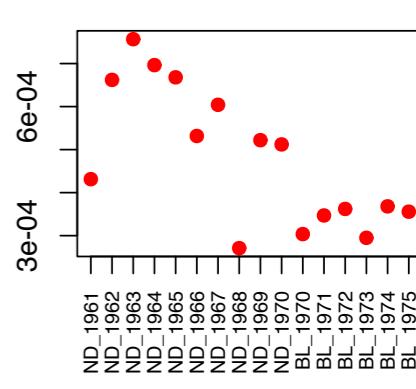
discrimination

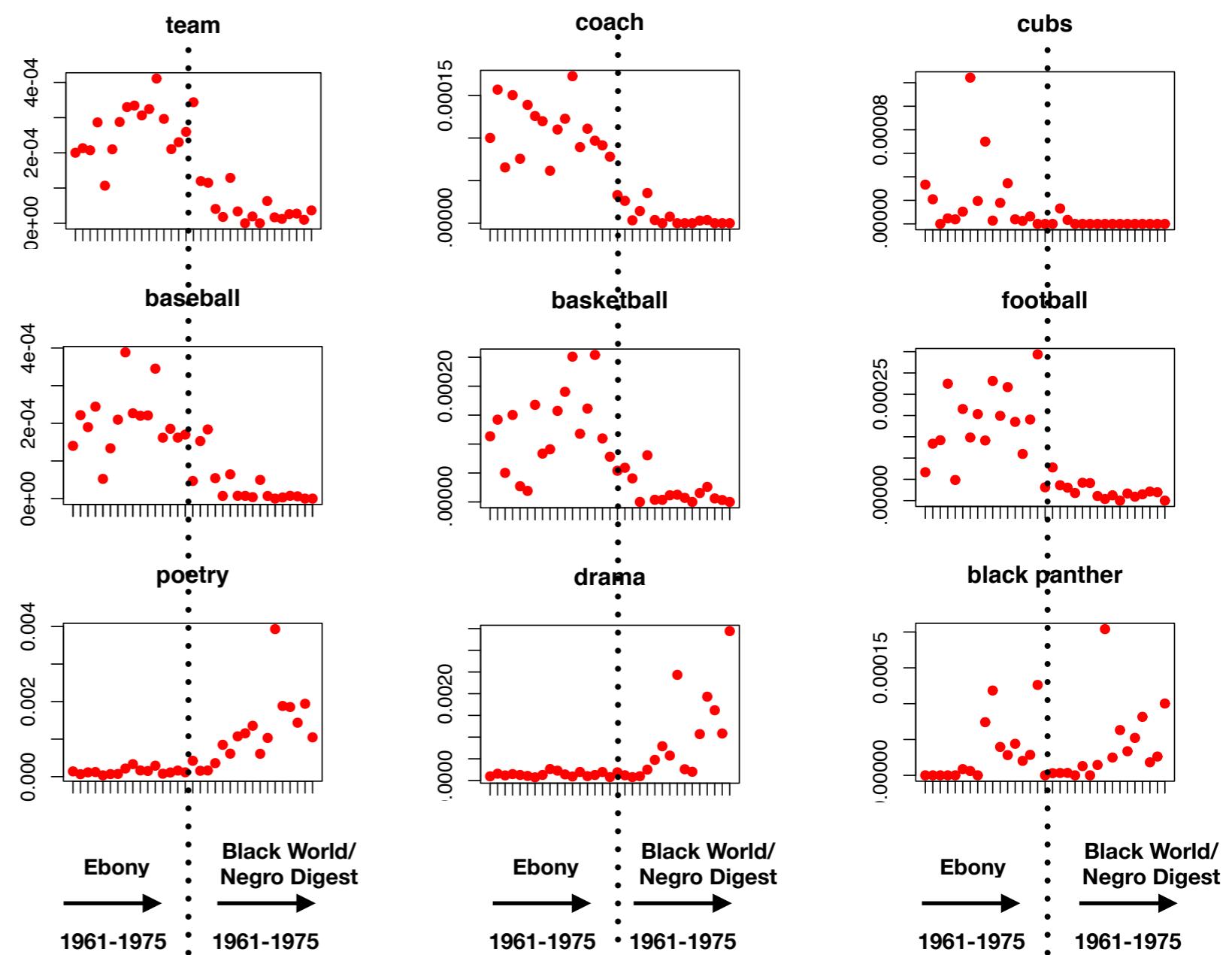
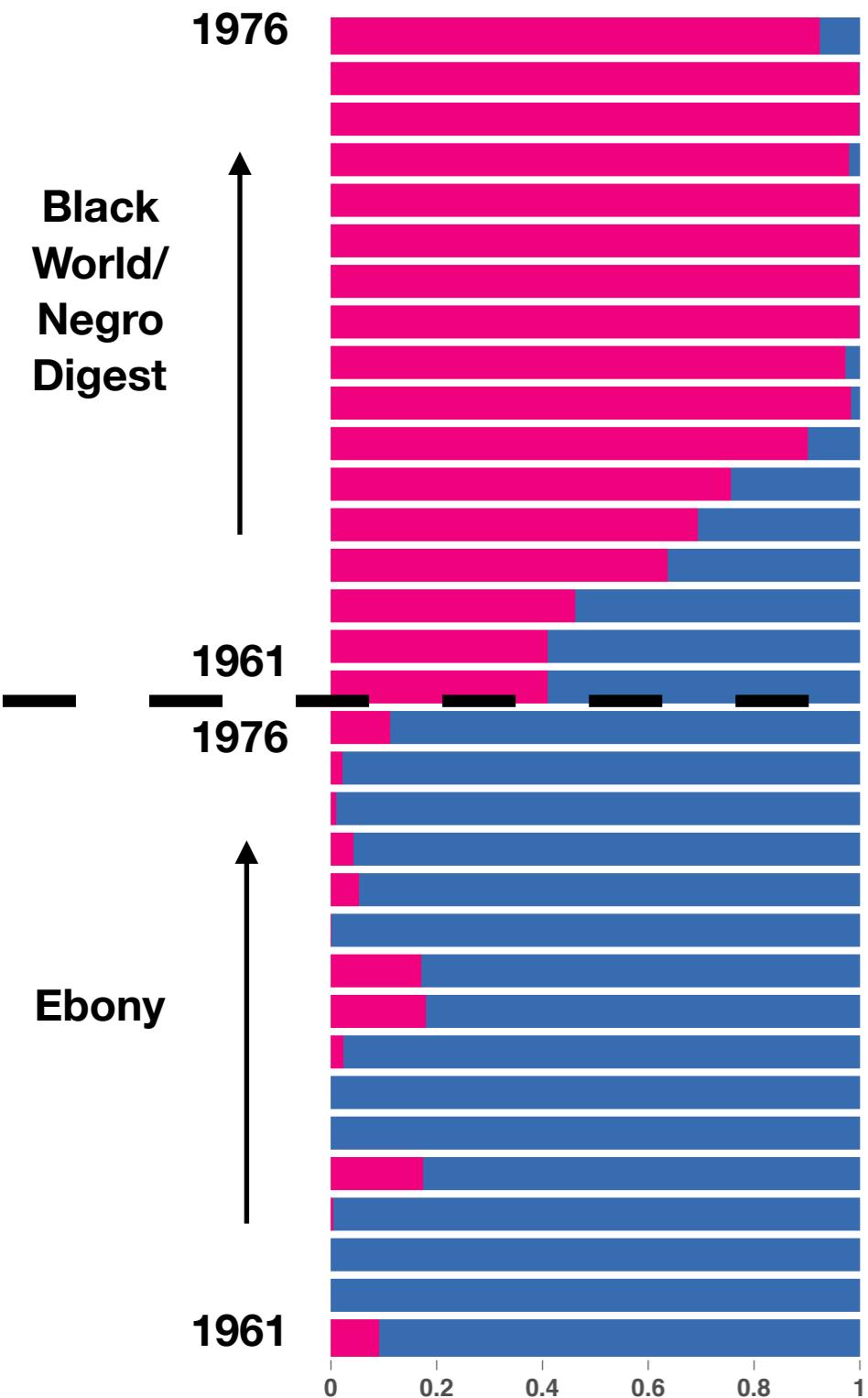


civil rights



race





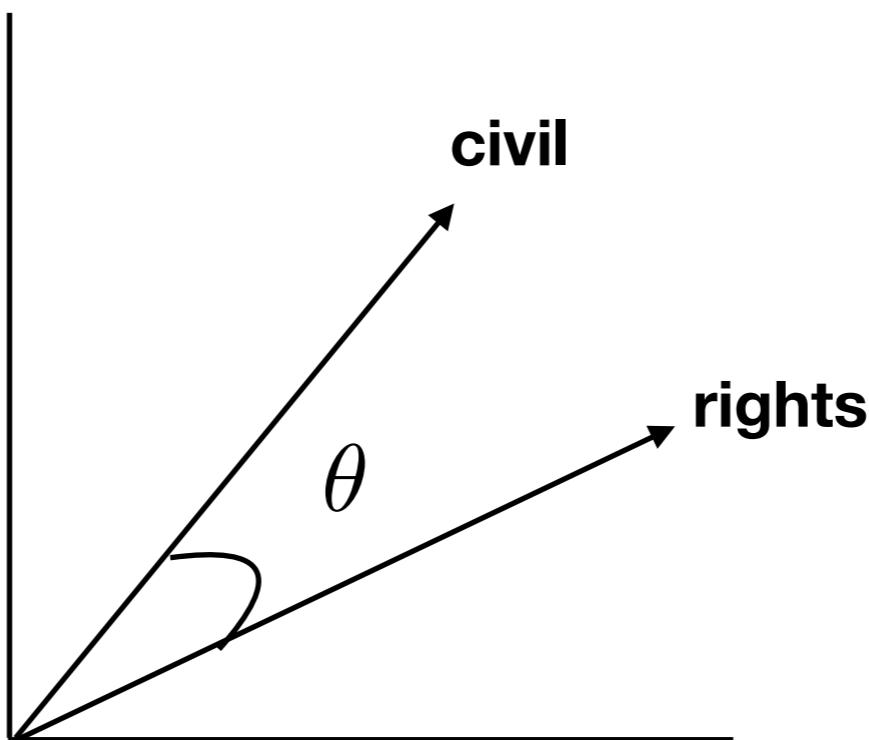
# **word context similarities analysis**

**(word2vec model)**

I fitted *word2vec* model on the combined text data for each year data.

## *Word2vec* Model

A neural network model that uses the neighbors of each word to learn a vector representation of the word.



Cosine similarity between the words - *civil* and *rights* given by the cosine of the angle between their vector representations

$$\cos(\theta)$$



## Words in Ebony closest in context to Dr. MLK over years

1961

martin  
tribute  
broader  
clan  
**dr\_king**  
staged  
sponsor  
nonviolent  
**martin\_luther\_king**

1962

montgomery  
protest  
outlawed  
**martin\_luther\_king**  
riders  
defiance  
fused  
**rev\_jr**  
atlantas

1963

**dr\_king**  
kings  
letter  
rev  
aug  
**dr\_kings**  
jail  
**martin\_luther\_kings**  
birmingham  
**martin\_luther\_king**

1964

**dr\_kings**  
**dr\_king**  
**martin\_luther\_king**  
deserve  
sclc  
christian  
hayling  
marchers  
nonviolent  
germans

1965

pastor  
norway  
tortuous  
oslo  
**dr\_king**  
reverend  
**martin\_luther\_king**

1966

**rev**  
**martin\_luther\_king**  
bevel  
raymond  
**martin\_luther\_kings**  
leadership  
**dr\_king**  
**dr\_kings**  
sclc  
antiracist

1967

**martin\_luther\_kings**  
**martin\_luther\_king**  
stokely  
acsclc  
christian  
steering  
**dr\_king**  
nathan  
carmichael

1968

**martin\_luther\_king**  
apostle  
**king**  
**dr\_kings**  
**martin\_luther\_kings**  
funeral  
memphis  
murder  
**dr\_king**

1969

**martin\_luther\_king**  
memorials  
**dr dr\_king**  
memorial  
abernathy  
king  
**martin\_luther\_kings**  
**dr\_kings**  
assassination

1970

assassination  
comparisons  
abernathy  
**dr\_kings**  
sclc  
ralphjr  
king  
**dr\_king**  
**martin\_luther\_king**

1971

**martin\_luther\_king**  
late  
burnings  
nonviolent  
buried  
**jrdr\_king**  
**dr\_kings**  
dr  
displeased

1972

**dr\_king**  
revolt  
selma  
**dr\_kings**  
dr  
memorial  
jr  
passive  
assassinated  
**martin\_luther\_king**

1973

**dr\_kings**  
slain  
**dr\_king**  
assassinated  
**martin\_luther\_king**  
medgar  
evers  
assassination  
enduring  
ceremonies

1974

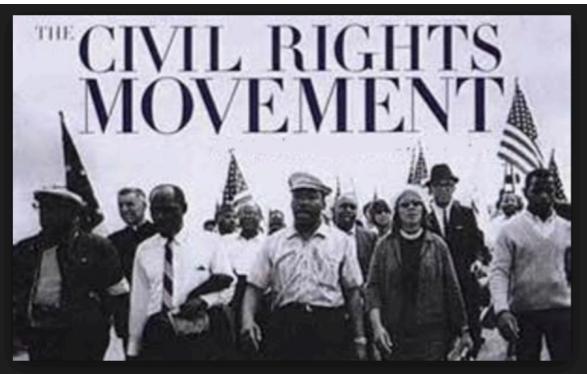
beloved  
**dr\_king**  
**martin\_luther\_king**  
malcolm\_x  
chenault  
lyghtira  
coretta  
**dr\_kings**

1975

**dr\_king**  
murders  
**martin\_luther\_king**  
assassinated  
**rev\_jr**  
reminded  
**dr\_king**  
malcolm\_x  
abernathy  
jailings

1976

**dr\_king**  
fbiperjury  
**dr\_kings**  
malcolm\_x  
assassination  
**martin\_luther\_king**  
hoover communist  
mccarthy



# 1961

wave  
soul  
delight  
ears  
silver  
lies  
numbers  
nonviolent  
contemporary  
**movement**

# 1962

boycott  
garvey  
swept  
one day  
niagara  
marcus  
protest  
nationalist  
antislavery  
**movement**

# 1963

sit in  
upward  
formation  
negotiations  
promises  
**movement**  
nonviolent protest  
niagara muslim

# 1964

amendment  
freedom  
leaders  
forefront  
crossed  
abolitionists  
protest  
followers  
abolitionist  
**movement**

# 1965

understandably  
partys  
keen  
freedom  
leadership  
dynamic  
sncc  
organization  
civil\_rights

# 1966

defending  
nonviolent  
crucial  
denouncing  
**movement**  
civil rights  
demonstrations  
coordinating  
leadership  
upheaval

# 1967

organized  
manifestation  
stirred  
activity  
civil\_rights  
strident  
gains  
upsurge  
**movement**  
activists

# 1968

civil\_rights  
factions  
separatist  
**movement**  
liberation  
niagara  
militant  
black\_power  
coordinating  
movements

# 1969

**movement**  
vanguard  
political  
thrust  
consciousness  
black\_power  
communit  
transformation  
civil\_rights matrix

# 1970

solutions  
militant  
leaders  
westward  
harlems  
black power  
adventurism  
momentum  
civil\_rights  
**movement**

# 1971

feminist  
acmrh  
shifted  
civil\_rights  
**movement**  
gaybights  
womensrights  
liberation

# 1972

nonviolent  
ominous  
womens  
**movement**  
civil\_rights  
thrust  
collapse  
protest  
liberation  
unity

# 1973

womens  
**movement**  
conceivable  
libblack\_power  
revolt  
liberation  
struggle  
civil\_rights  
sixties

# 1974

selfinterest  
civil\_rights  
leaders  
socialism  
struggle  
womens  
defining  
liberation  
revolutionary

# 1975

boycotts  
migration  
protest  
resistance  
salvation  
civil\_rights  
integrationist  
transformed  
**movement**  
vantage

# 1976

feminist  
leaders  
seeds  
niagara  
panafrican  
liberation  
**movement**  
independence  
consciousness  
nationalist

# **Stable word-word similarities**

**(word2vec + CorShrink)**

# 1968 Ebony: word2vec-similarities before and after CorShrink



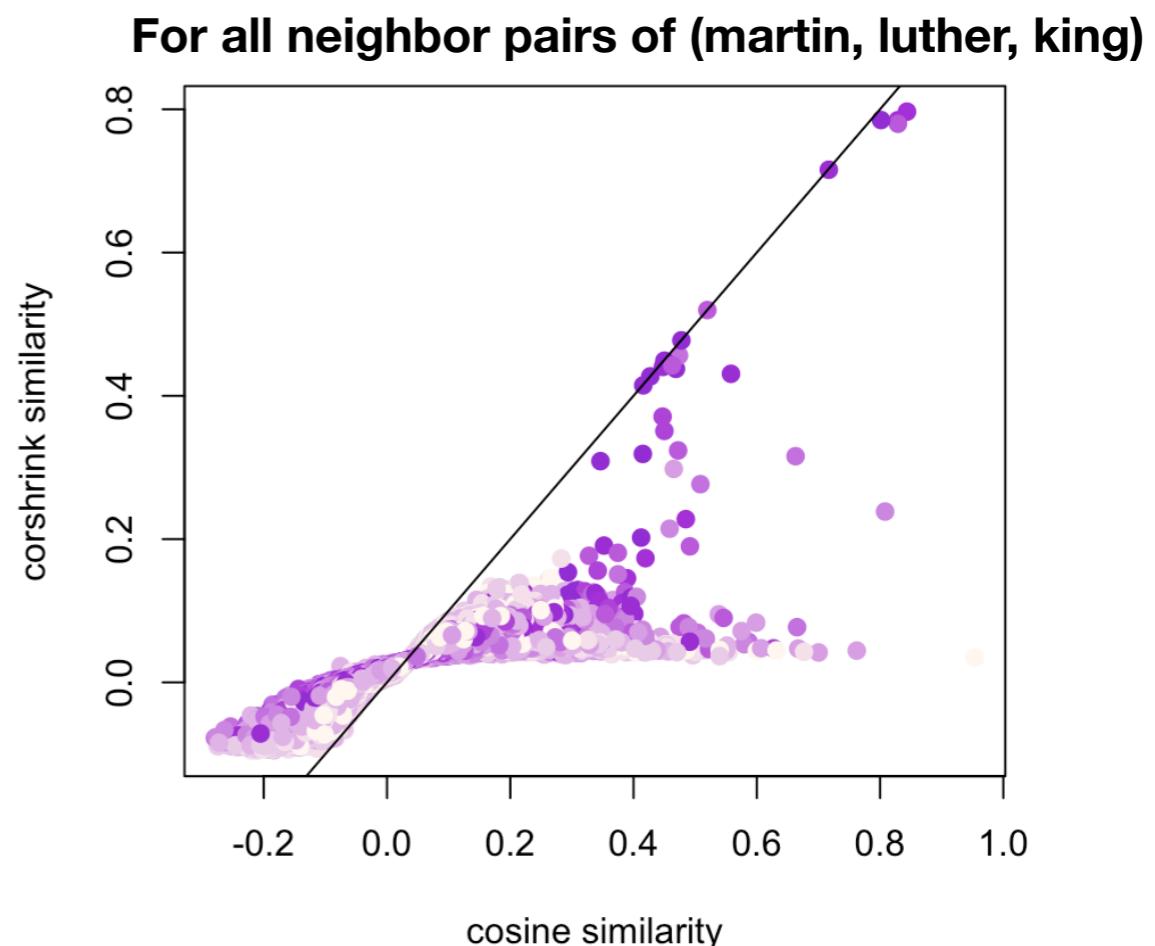
**Words close in context to  
Dr. Martin Luther King Jr.**

**before  
CorShrink**  
  
(nearest 25 words  
to martin, luther, king)

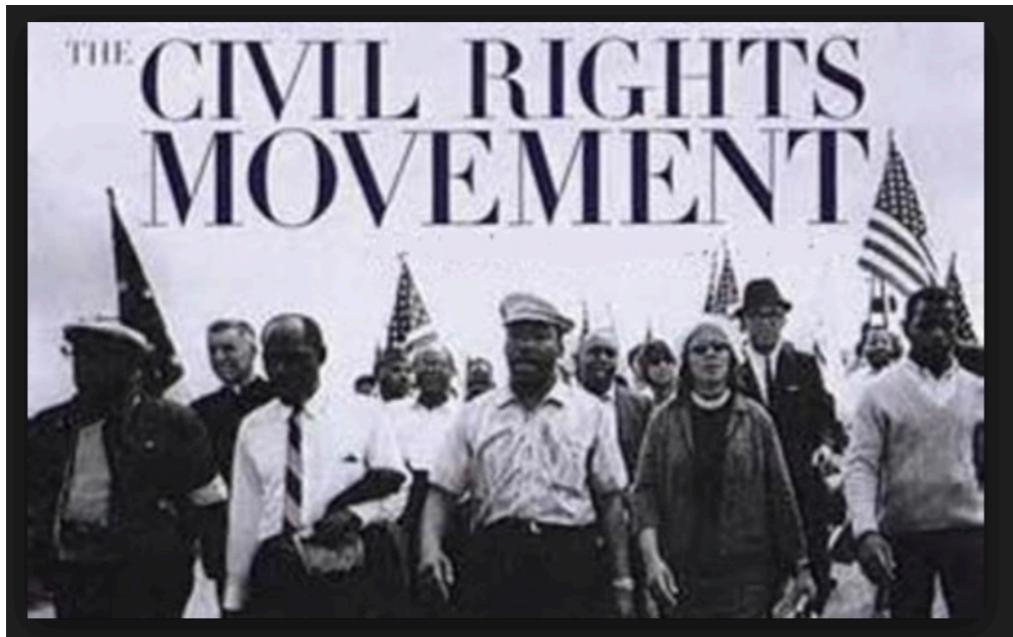
luther	martin	king	rev	apostle	floyd	requested
0.8908471	0.8535049	0.8485832	0.4063000	0.3981613	0.3509520	0.3498945
fiery	assassinated	murder	francis	funeral	forres	late
0.3463924	0.3427114	0.3375902	0.3301637	0.3293240	0.3269475	0.3180746
kings	joan	prince	caucuses	abernathy	preaching	marched
0.3070072	0.3051331	0.3048364	0.2954050	0.2925116	0.2891073	0.2868515
prophet	kennedy	assassination	seeds			
0.2835925	0.2812839	0.2809260	0.2785261			

**after  
CorShrink**  
  
(nearest 25 words  
to martin, luther, king)

luther	martin	king	rev	jackson	leader	assassination
0.86047946	0.83742984	0.83344445	0.23006744	0.10901378	0.09842106	0.09665314
james	kings	ralph	montgomery	courtship	late	birmingham
0.09482433	0.09374696	0.09264236	0.09258621	0.09234065	0.09025221	0.09022915
murder	civil	peace	actively	wright	personal	rights
0.08954815	0.08924835	0.08922241	0.08921495	0.08874579	0.08867831	0.08789465
naACP	god	voice	marched			
0.08683455	0.08661692	0.08588993	0.08563276			



# 1968 Ebony: word2vec-similarities before and after CorShrink



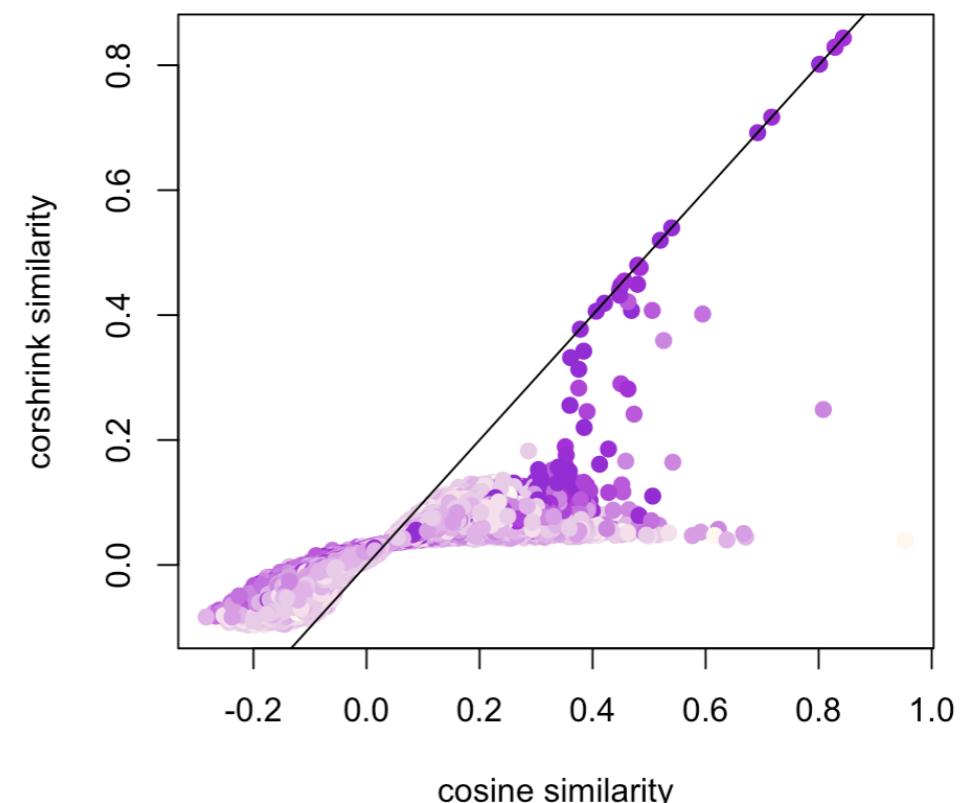
**Words close in context to  
civil and rights**

**before  
CorShrink**  
(nearest 25 words  
to civil and rights)

civil	rights	movement	legislation	disorders	bills
0.9007841	0.9007841	0.4405455	0.3730043	0.3550964	0.3421801
enforcement	movements	strengthened	involvement	equal	protection
0.3402390	0.3323286	0.3269478	0.3155524	0.3120888	0.3120654
reconstruction	belonged	cowboys	andrew	randolph	amendments
0.3117899	0.3022773	0.2964739	0.2961406	0.2911620	0.2899793
murders	commission	nonviolent	recommendations	brutal	sncc
0.2860052	0.2846442	0.2844914	0.2823338	0.2760409	0.2733980
paradox					
0.2722072					

**after  
CorShrink**  
(nearest 25 words  
to civil and rights)

civil	rights	movement	equal	militant	commission	war
0.90078411	0.90078411	0.28434679	0.11712699	0.11265973	0.11157274	0.10768549
freedom	committee	involvement	luther	equality	principles	became
0.10677891	0.10644511	0.10586616	0.10202443	0.10028706	0.09897363	0.09890537
human	complications	georgia	constitution	nonviolence	legislation	voting
0.09883332	0.09716990	0.09696635	0.09610843	0.09607732	0.09593372	0.09576468
workers	integration	political	law			
0.09572006	0.09560082	0.09551930	0.09485102			

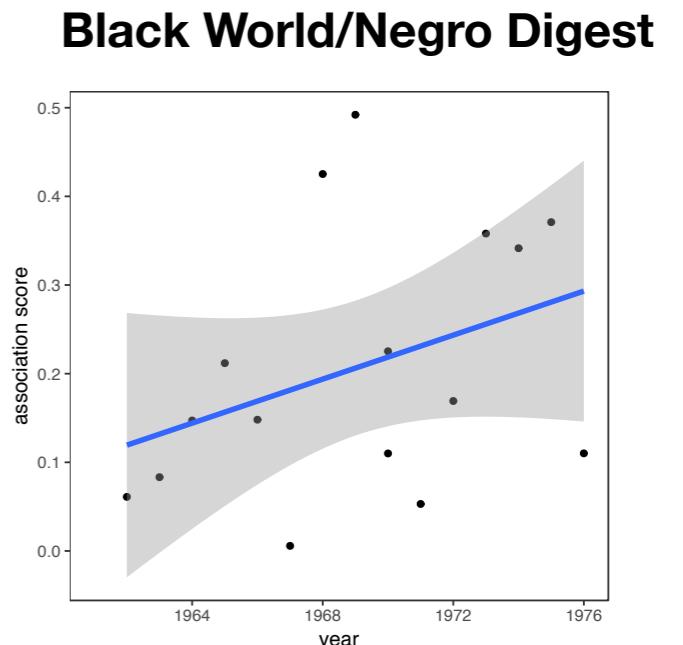
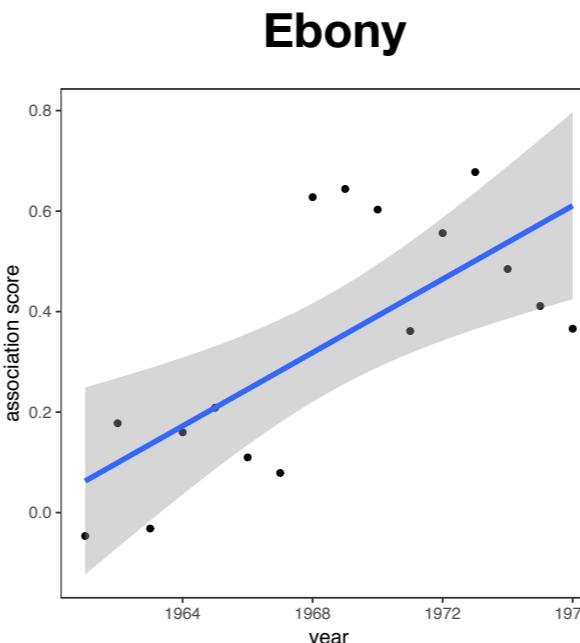


# Trends in word association analysis

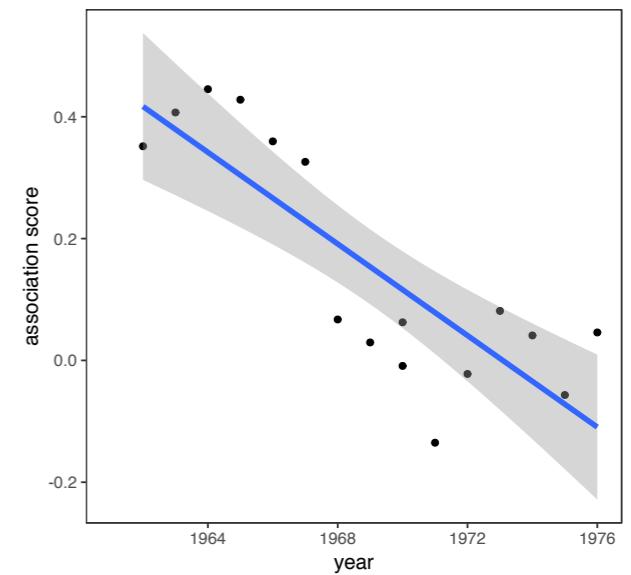
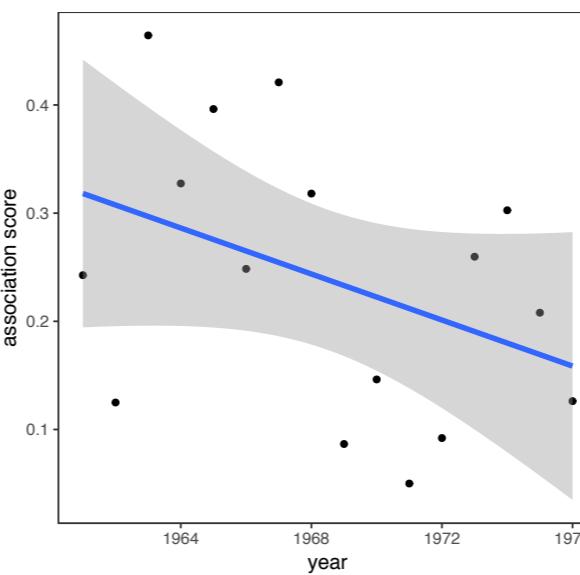
(word2vec model)

## Word sets

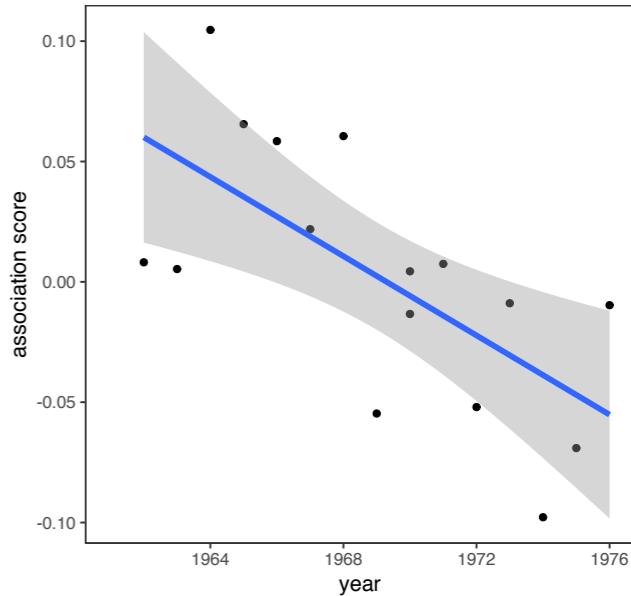
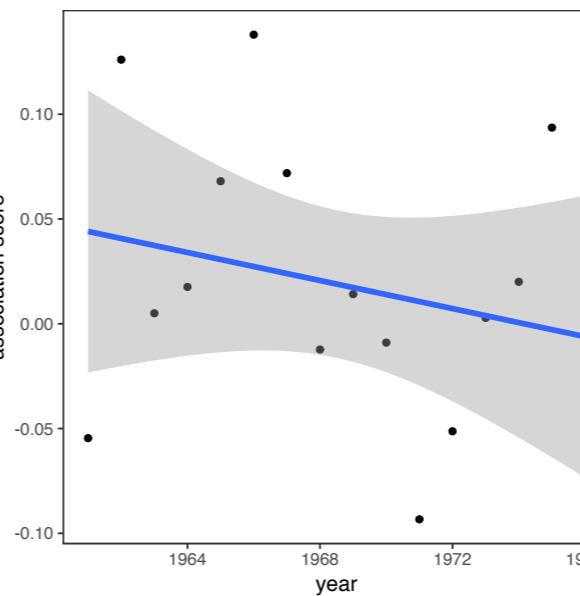
**(martin luther king, dr.king)  
vs (assassination, death,  
assassinated,died, murder)**



**(negro, negros, negroes)  
vs (struggle)**



**(blues) vs  
(black, blacks)**



# Summary

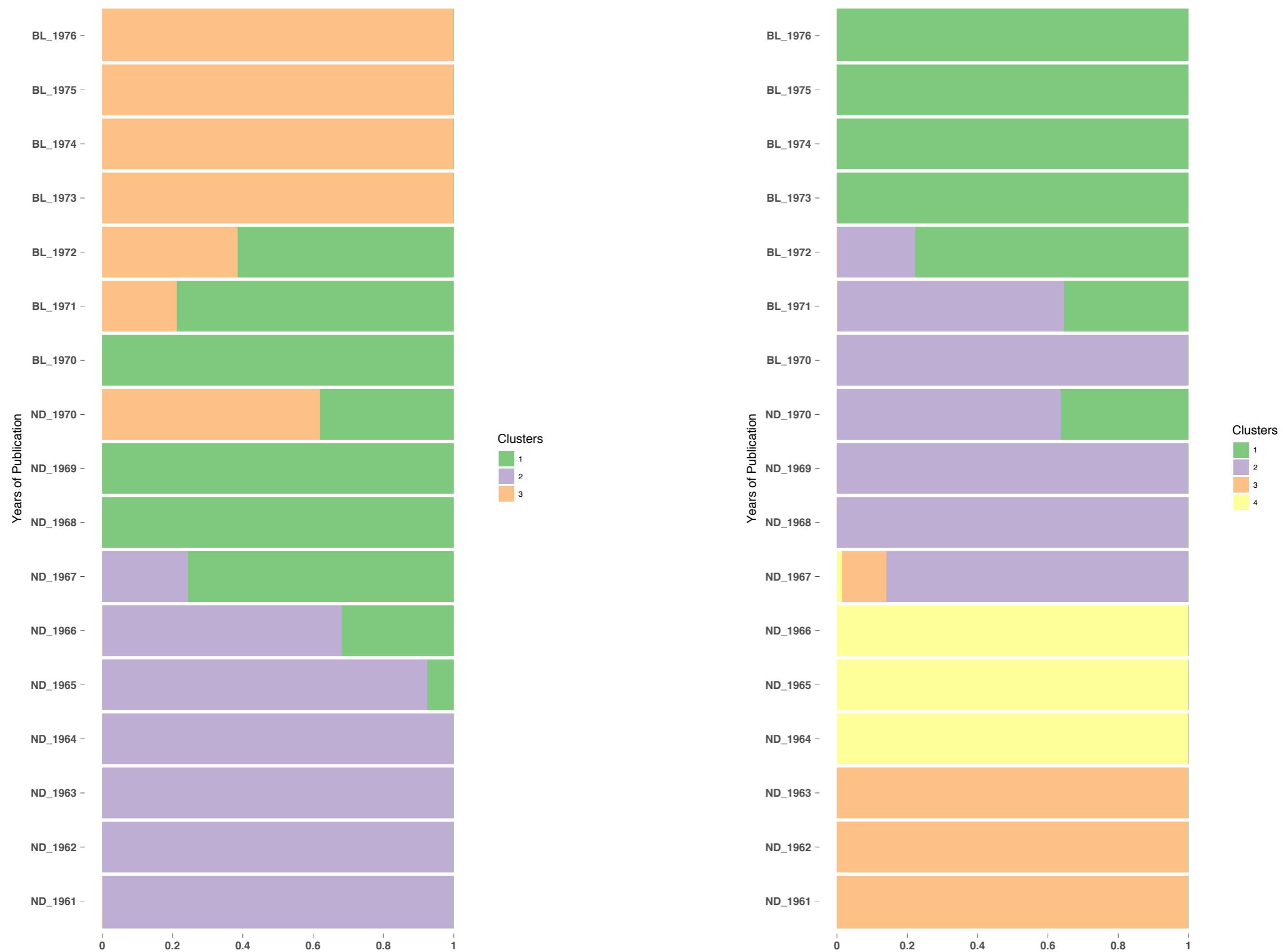
- The text analysis of the two magazines - ***Black World/Negro Digest*** and ***Ebony*** - in the period of 1960-1975 seem to show a transition of narrative from **Civil rights movement era** to **post civil rights movement** era - which is not just driven by **black** and **afroamerican** terms replacing the word **negro**.
- The civil rights era narratives were expectedly driven by ***race, segregation, discrimination, movement, march*** etc - while the post civil rights era focused on **black power** and **black arts movement**, as well as the **black panther movement**.
- The coverage of the **Black Arts movement** narrative was more pronounced in ***Black World/Negro Digest*** compared to ***Ebony***, but the latter showed overall stronger coverage of **sports news** compared to the former.

# Summary

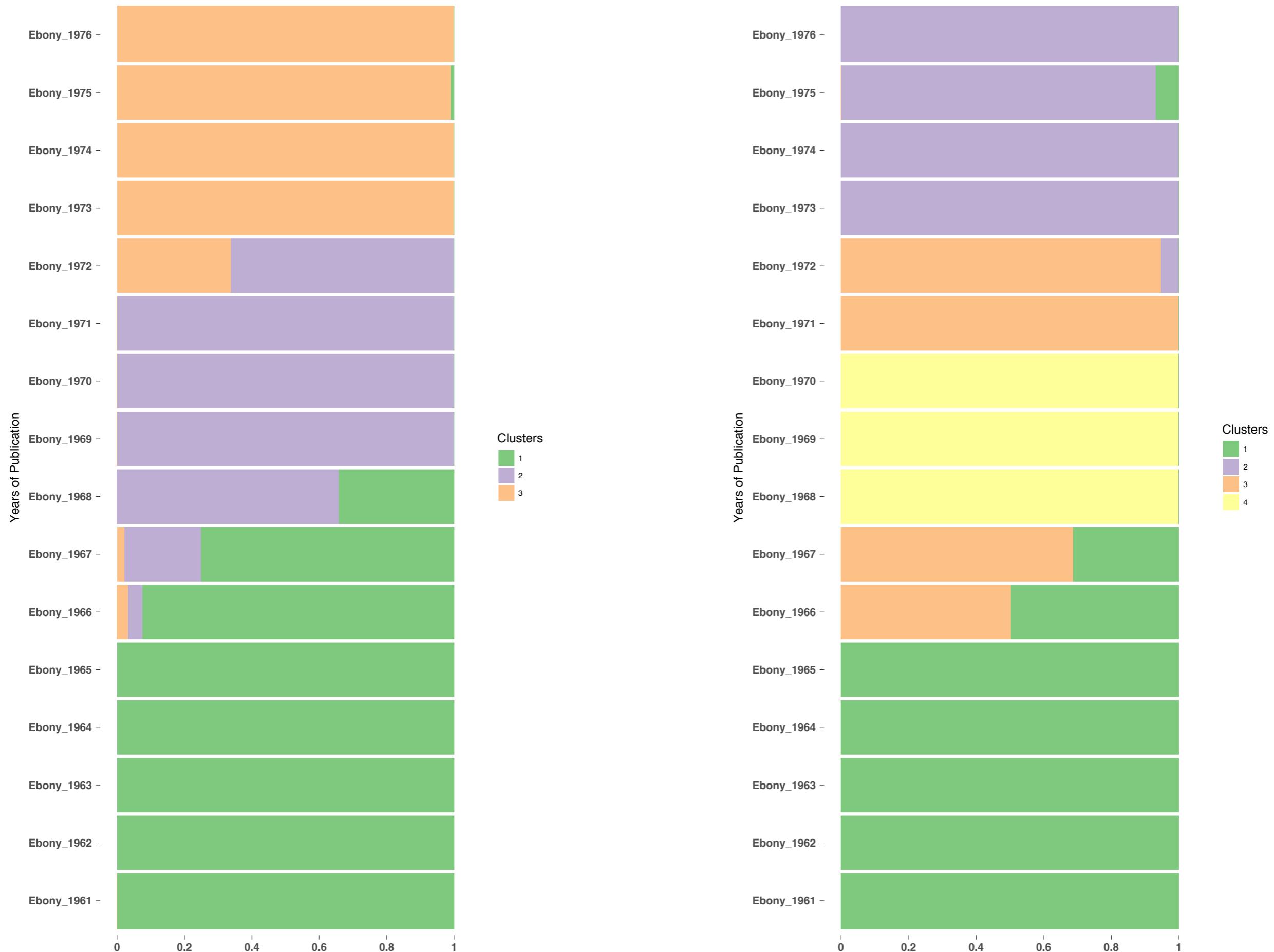
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- The civil rights era narratives were expectedly driven by *race, segregation, discrimination, movement, march* etc - while the post civil rights era focused on *black power* and *black arts movement*, as well as the *black panther movement*.
- The coverage of the **Black Arts movement** narrative was more pronounced in Black World/Negro Digest compared to Ebony, but the latter showed overall stronger coverage of **sports news** compared to the former.
- We presented methods to obtain words contextually similar to key words of interest - **civil rights, movement, Martin Luther King** etc - and observed how the contexts for these words change over time, as new narratives take shape. Case in point - **MLK assassination**.
- We also present a method that generates a more robust similarity score for the above problem, less driven by **author or event specific biases**.

Packages used : **wordVectors, CountClust, ash, wordcloud, methClust, CorShrink**

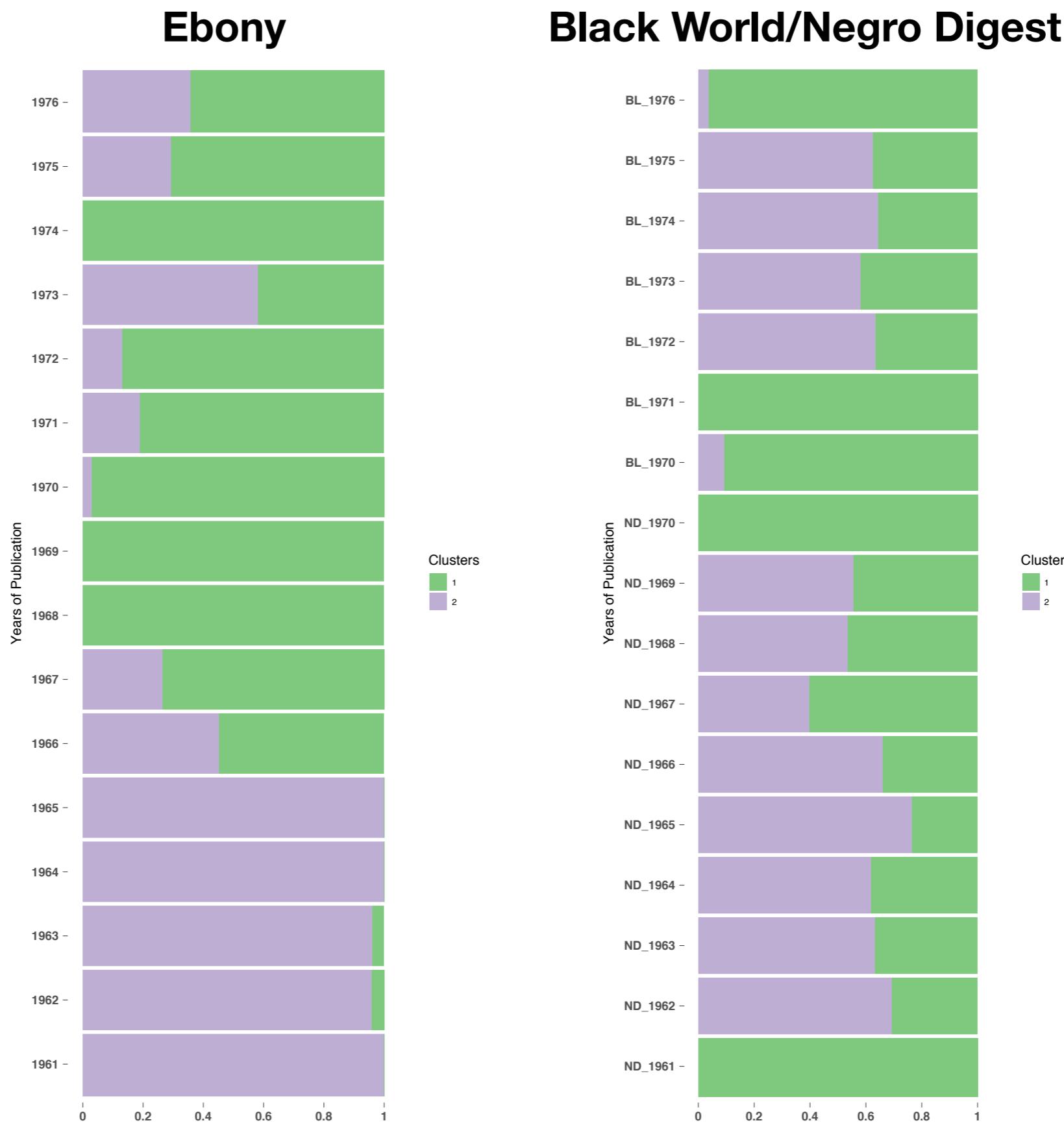
# Black World /Negro Digest higher K structure



# Ebony higher K structure



## methClust grouping



***black power, stokely, carmichael*** were among top driving words for the green cluster in both cases