Swine flu and collective symbolic coping: a comparison between the public sphere of Mexico and Spain

Nahia Idoyaga

Jose F. Valencia

Lorena Gil de Montes

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2009-2010 pandemic swine flu

- Swine flu, pig influenza, influenza A (H1N1).
- Began in Veracruz Mexico in march 2009 and spread quickly
- Countries around the world took extraordinary measures
- WHO declared the pandemic in June 2009 with 30,000 cases in 74 countries
- On August 10, 2010 the WHO declared the end with 18,449 deaths in 214 countries
- For first time the international media followed in real time the evolution of a pandemic

Collective symbolic coping (CSC)

- Describes how groups make sense of novel situations that threaten the social order (Wagner *et al.*, 2002)
- Produced by the media → Communicate a new situation as challenging an established way of life
- Communications (as individuals or member of groups) help to evaluate the challenge that the novelty poses (Orr, Sagi & Bar-On, 2000; Wagner 1998)
- These representations provide individuals and groups ways of interpreting and dealing with the new risk
- CSC occurs in four stages: Awareness, Divergence, Convergence and Normalization.

- **Awareness:**
  - The new situation has to be considered relevant by the society to create a public's awareness
  - The media give relevance to the new events, through the process of agenda-setting (McCombs, 1981).
- **Divergence:**
  - Multiple frames emerge creating ambiguity and uncertainty about origins of the new situation
  - Novelty may change prior knowledge
- **Convergence:**
  - A dominant discourse emerges that decreases uncertainty
  - The group attains a new conventionalized interpretation
- **Normalization:**
  - The new explanation is integrated into common knowledge
  - Can weaken: removed from the agenda or emotionally sterile
  - Normalization is a complex process that can last decades

CSC - applications

- CSC theory is useful in describing the events that threaten the established social order
- Initially biotechnology→ Now has been applied in health crises.
- Avian influenza (Gilles et al., 2011) :
  - Useful for health crises: because this type of crises represents a physical threat, and also a symbolic threat to the society (Joffe, 1999).

We will analyze the swine flu crisis with the CSC model, taking into account the time course and textual structure of media coverage of this crisis

Method

- Sample and analysis unit
  - 142 front pages, 142 articles and 25 editorials from El Universal (Mexico) and El País (Spain). From April 2009 to August 2010

- Design and coding:

1. **Analysis of the front pages**: taking into account the time course, epidemic context, geographical spaces and major players.
2. **Analysis of articles and editorials:** Text analysis →Alceste software

-To avoid the problems of reliability and validity.

-167 articles and editorials with 129462 words were analyzed.

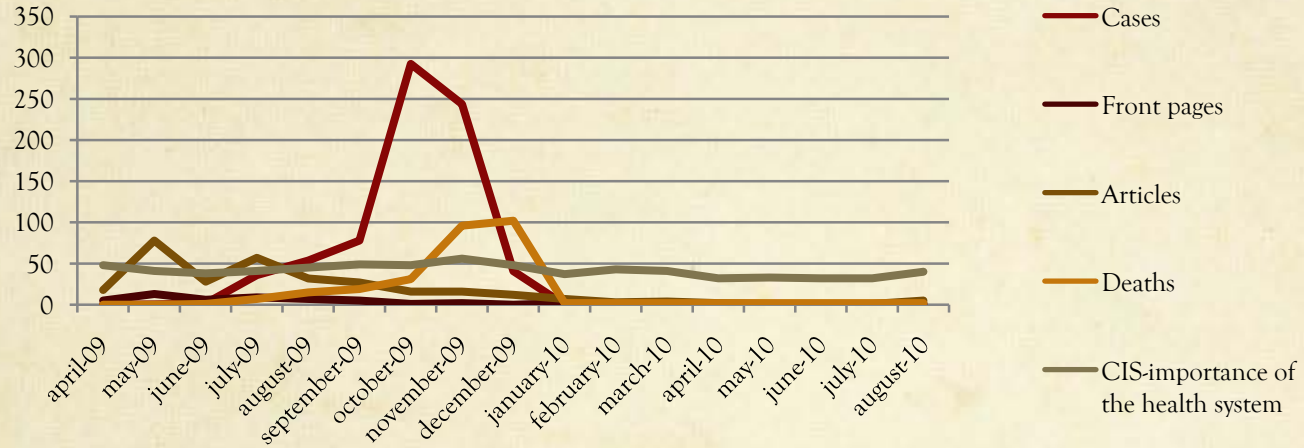
- The aim is to quantify a text to extract its strongest significant structures so as to draw the essential information contained in the textual data.

-Descending Hierarchical Classification → carries out successive splits of the text. It finds the strongest vocabulary oppositions and extracts some categories of representative terms.

Results

Situation in time and context

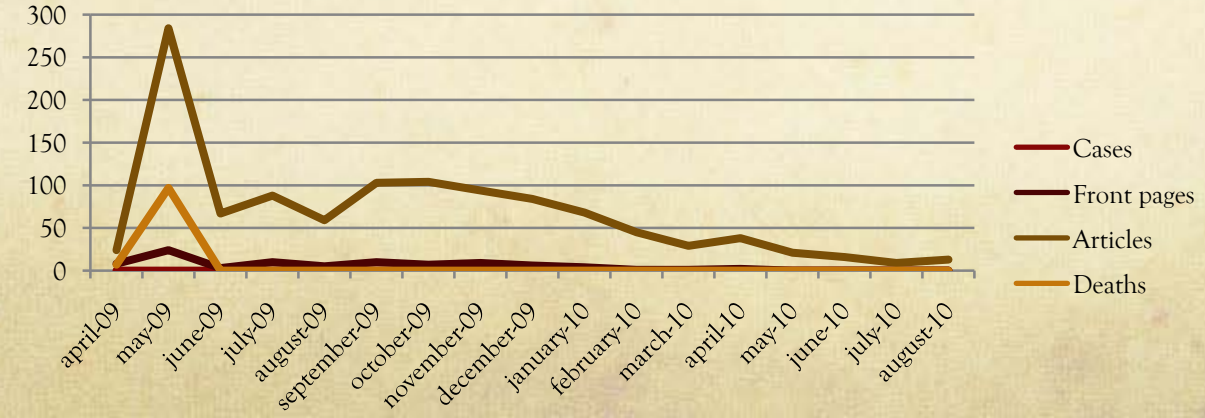
- Spain



*CIS: Center for Sociological Research of Spain

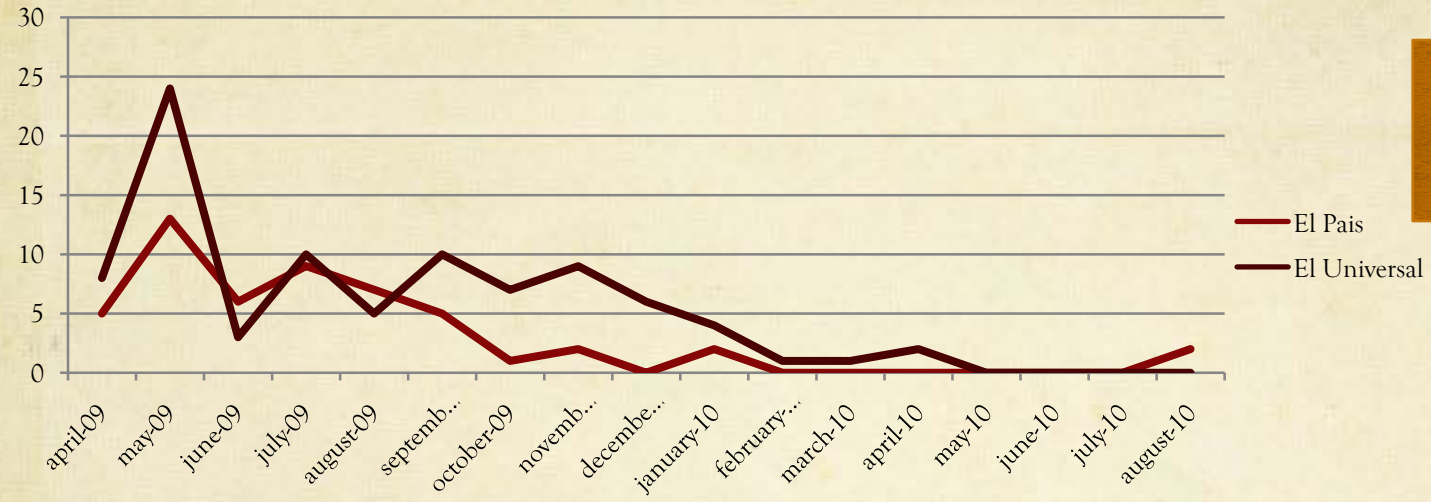
Spearman correlation:
-Cases-Articles:
r(17)=0,565, p <0,05
-Articles-CIS:
r(17)=0,578, p <0,05
-Cases-CIS
r(17)=0,605, p <0,05
-Deaths-.CIS
r(17)=0,518, p<0,05

- Mexico



Spearman correlation:
-Cases-Articles:
r(17)=0.850, p<0.01
-Articles-deaths:
r(17)=0,898, p<0,01
-Cases-Front pages
r(17)=0,799, p <0,01
-Front pages-deaths
r(17)=0,751, p<0,01

Overview of the headlines



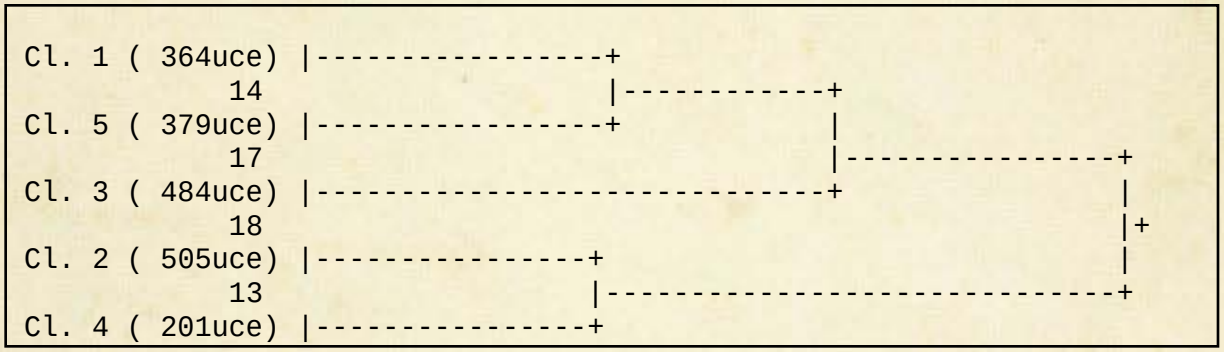
142 headlines:
El Pais 52 (36,6%)
El Universal 90 (63,4%)

79,6% before october 2009

- **References to the own country**
  - El Universal 68,4%, El País 31,6% X^2 (1) = 6.329, p <0,01.
- **Main characters**
  - **Citizens:** El Universal 56,6%, El País 24,1% X^2 (1) = 3.259, p <0.05
  - **Leaders of the own country**: El Universal 75,9%, El País 24,1% X^2 (1)=6.581, p<0.01
  - **World leaders:** El País 70,6%, El Universal 29,4% X^2 (1) = 9.601, p <0.002

Analysis of articles and editorials

- 142 articles+25 editorials: 39,5% El País 60,5% El Universal
- The corpus had 129,462 words, of which 11,561 were distinct words
- The descending hierarchical analysis divided the corpus in 3142 ECU (Elemental Contextual Unit) and worked 1933 ECU (62%). This work extracted 5 classes:



- **Class 1:** Prevention to protect against the flu (19% of the ECU)
- **Class 2:** The global pandemic and WHO's response (26% of the ECU)
- **Class 3:** Creation and use of vaccines (25% of the ECU)
- **Class 4:** Dead and victims of Influenza A (10% of the ECU)
- **Class 5:** Government management of the crisis (20% of the ECU)

Analysis of articles and editorials

Class 1: *Prevention to protect against the flu (19% of the ECU)*

1) *Body Parts:* mano (144), sexual(52), boca (48), sus (45), beso (39), estornud+(38)…
2) *Prevention tools:* mascarilla (80), lavarse (48), enfermer+ (45), cubreboca (42), guantes (41), panuelo (39)…
3) *Companies:* empresa (85), emple+ (84), trabaj+ (76), trabajador (63), cliente (58)
4) *Other:* plan (59), contingencia (50), frecuencia (38), evitar (37)…

Class 2: *The global pandemic and WHO's response* (26% of ECU)

1) *Influenza A:* virus (207), pandemia (138), mutacion (107), aviar (87),infect (69) h5n1 (66), nueva (58), gripe (49)…
2) *WHO:* OMS (215), chan (86), fukuda (64), declar+ (46)…
3) *Global level:* expansion (66), fase (51), alerta (46), mundo (44)…
4) *Other:* caus+ (56), leve (56), parec (48)…

Class 3: *Creation and use of vaccines (25% of the ECU)*

1) *Created vaccines:* vacun+ (703), dosis (246), millón (163), vacunación (99), aplic+ (86), produc+ (68), lote (57), estacional (53), compr+ (56), medicament+ (50), farmaco+ (44)…
2) *Pharmaceutical Companies:* laborator+ (206), grupo (83), farmaceut (56), sanofi (54), ensayo (51), birmex (47), investigad (44)…
3) *Other:* diciembre (46), riesgo (43), octubre (41)…

Class 4: *Dead and victims of Influenza A (10% of the ECU)*

1) *Dead:* deceso (152), fallecimiento (95), muert (90), defunción (80) fallec (71), muer (78)…
2) *Record of affected:* caso (307), report (253), registr (171), contabiliz (155), confirm (152), numero (126), cifra (115), neumonia (82), ultim (75), total (58), aument (55), contagio (47), pico (46)…
3) *Other:* ssa (106), increment (104), agosto (79)…

Class 5: *Government management of the crisis (20% of the ECU)*

1) *Paralyzed activities:* clase (195), escuela (173), educación (140), suspend (133), actividades(119), escolar(101), acción(63), vigilancia (59), medida (55)…
2) *Political leaders*: secretar (190), angel (131), cordova (122), jose (99), calderón (99), felipe (79), ebrad (70), ahued (56), villalobos (55)…
3) *Other*: plantel (66), epidemiolo (66), regres (55)…

Analysis of articles and editorials

Relations with the independent variables :

Newspapers:

EL PAIS	EL UNIVERSAL
1)Prevention to protect against the flu X^2 (1) = 26.81, p <0.001 2) The global pandemic and WHO's response X^2 (1) = 211.70, p <0.001	3) Creation and use of vaccines X^2 (1) = 15.22, p <0.001 4) Dead and victims of Influenza A X^2 (1) = 41.11, p <0.001 5) Government management of the crisis X^2 (1) = 126.81, p <0.001

Publication month:

Conclusions and discussion

- **Presentation of the crisis in newspapers**
  - The swine flu crisis had a significantly higher presence in the press from April to October 2009, however from that point forward the public debate on Influenza A gradually faded.
  - During those months the swine flu had a great echo in society and that the visibility of the problem was high
  - Correlation analysis showed that the number of articles published was related to the objective threat:
    - These correlations were higher in El Universal: in the context where the objective threat was greater in our case in Mexico, the following up by the media was more accurate.
    - Most articles in El Pais were published before the swine flu arrived in Spain: Spanish media, published about the hypothetical crisis could come to that country.

- **The CSC in newspapers**
  - During the first quarter of the crisis (April, May and June 2009) Influenza A had a very high presence→ follows the process of agenda-setting→ A flu became relevant to society by **awareness process**.
  - **Divergence phase:** From July 2009 to February 2010: was a wide variety of classes: those related to the management of governments, international organizations, vaccines, companies..
  - **Convergence phase:** appears January 2010 onwards, with the drop in coverage and inconsistent frames disappearance.
    - Clearer in August 2010, resulting speech: The global pandemic and WHO's response. Which is linked to the transmission of fear or danger using words like "pandemic“
  - Finally, and as had happened in other crisis in epidemiological research (Gilles et al., 2011) did not detect the phase of **normalization**: This could be explained by the forecasts made before the pandemic or the risk of developing a epidemic is relatively frequent

- Therefore, the use of class influences the risk perception and the response that the people give to the event.
- That´s why it would be very important to create an effective policy in health-communication .
- It would be very positive that these communications reached the phase of normalization, making them possible sources of knowledge for future health epidemics.

QUESTIONS

SUGGESTIONS

Relations with the independent variables :

- Publication month:

MONTH	CLASS
April-09	The global pandemic and WHO's response
May-09	Prevention to protect against the flu The global pandemic and WHO's response Government management of the crisis
June-09	The global pandemic and WHO's response
July-09	Prevention to protect against the flu
August-09	Creation and use of vaccines Dead and victims of Influenza A
September-09	Prevention to protect against the flu Dead and victims of Influenza A Government management of the crisis
October-09	
November-09	Creation and use of vaccines Dead and victims of Influenza A
December-09	Creation and use of vaccines Dead and victims of Influenza A
January-10	Creation and use of vaccines Government management of the crisis
February-10	Creation and use of vaccines
De March a July del 2010	
August-10	The global pandemic and WHO's response