Understanding Ambiguous Events

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Introduction: When interpreting events, individuals seek information on three aspects of occurrences: the actor (A), behavior (B), and object (O) (MacKinnon 1994). However, complete information is not always available. For example, in the specific event – a police officer shoots a dog – information available to interpreters could take five forms: 1) Police officer shoots dog (ABO), 2) Police officer fires shots (AB), 3) A police officer did this to a dog (AO), 4) Dog shot (OB), or 5) Shots fired (B). These five statements not only represent variations of the ABO structure, but also common organizing frameworks for news headlines.

Background: Our project initially began as an exploration of the connection between news headlines and cognitive processes (using ACT). We asked: are readers more interested in a surprising headline that is complete, like "Police officer shoots dog," or an incomplete headline, similar to those used as "clickbait," like "Police officer fires shots." The latter could either be about an unexpected event (e.g., at a child or friendly animal) or one consistent with cognitive schemas (e.g., at a criminal or a rabid dog)? In addition to determining whether incomplete information dampens or piques interest (Fiske and Neuberg 1990), we hoped to locate which missing information (A, B, or O) is most likely to draw an observer's interest (Nelson 2006) – a question that is not only practically relevant, with insight for journalists and others interested in mass communication, but also important for social psychological theories of how persons make sense of ambiguous information .

To answer these questions, we presented a list of high-deflection headlines to 500+ mTurk respondents, varying the structures of the event (see Table 1) and the components (Table 2). We found that respondents were most interested in full, high-deflection headlines (X^2 42.58, p<.001, *df* = 5) and that those that lacked a person (i.e., an actor [BO] or object [AB]) or persons (i.e., B alone) were significantly less likely to be selected than expected by chance. While somewhat interesting, we believe that there is much more to learn about ACT, cognitive processes, and clickbait headlines or other ambiguous events from our data.

Conference Presentation: For the ACT conference this summer, we would like to briefly introduce our research design, survey, and the types of data we collected, and share some of our most interesting findings to an audience of experts to get a sense of what they see as most promising in the data For example, we hope to share trends in our respondents' interpretations of the headlines. For full events (ABO), we asked "Why do you think this happened?" We coded these qualitative responses for modification, redefinition, and omission, as well as for sequencing (Ramos, Smith-Lovin and Young 2016) and are planning to code the responses using automated sentiment analysis algorithms (see Table 3). For incomplete headlines, we asked respondents to fill in the missing information (Table 4). We transformed these responses into EPA ratings in order to examine heterogeneity across respondents in the deflection generated by the headline. We also have data on an ambiguous event structure, where a person was "involved in" an event, to gauge the role respondents believe the person played in the event (A or O), and we can explore whether structure or specific components influence attention, as we asked respondents why they chose particular headlines to read. Finally, we closed the survey by collecting demographic information, including age, sex, race, education, parental status, and political leanings of respondents (see Table 5). With this data we should be able to evaluate how particular attributes might inform interest in news stories, as well as influence patterns of and interpretation (e.g. Are parents more interested in events with children, or certain groups more interested in stories about shooting? Do liberals fill in the targets of police aggression with higher levels of E or lower levels of P than conservatives?).

Although we just recently finished coding our data and are just now beginning our analyses, if invited to the conference, we would love the opportunity to share our with the ACT community.

Table 1. Event structures and their popularity

Event Structure	*Examples with same A-B-O*	*Selected to Read*
ABO	Police officer shoots infant	39%
AB	Who a police officer shot	9%
AO	A police officer did this to an infant	15%
BO	Infant shot	10%
B	Reported shooting	11%
ambiguous A/O+B	Police officer involved in shooting	16%

Table 2. Components of events, pulled from news headlines

Actor (A)	father/mother, police officer, man/woman, caregiver
Behavior (B)	attacks, kills, stabs, shoots, abandons
Object (O)	elderly man/elderly woman, infant, boy/girl, dog

Table 3. Example explanations for high-deflection events

Headline	*Explanation*	*Coding*
Caregiver attacks girl	A babysitter, or daycare worker, hit a girl	RA, RB
	A babysitter struck a girl in her care.	RA, RB
	The caregiver was on drugs.	MA
Police officer stabs infant	The police officer has a mental breakdown.	MA
	It was an accident.	MB
	It sounds like a police officer stabbed a helpless child.	RO
Father shoots infant	A gun accidentally went off.	NA, NO
Father shoots dog	Dog bit his kid and he shot it.	SEQ

Table 4. Sample interpretations of ambiguous events

Headline *(Prompt)*	**Sample Responses**
Who a caregiver abused *(Who do you think this was done to?)*	a baby, an elderly person in their care, a mom, a child, an elderly man, elderly relative, elderly person, senior citizen
A man did this to a boy *(What do you think was done?)*	sexually abused, help, assault, give a reward, saved from a gator.
Infant attacked *(Who do you think did this?)*	a babysitter, a step-parent, the mother's boyfriend, the family pet, a dog (2), an animal
Reported Shooting *(Who do you think fired the shots? Who was shot?)*	black person_black person, intruder_homeowner, man_man, criminal_store clerk, police_crime suspect, police_black man, gang member_gangmember, mentally-ill person_civilian
Man involved in abuse *(What happened?)*	a man abused someone (A), a woman probably beat her husband (O), child abuse (A), priest abused altar boys (A)

Table 5. Demographics

Age	35.6				
Male	52%	**Education**		**Political Scale**	
Race		*Less than HS*	0.3%	*Extremely Liberal*	12%
White	78%	*High School/GED*	13%	*Liberal*	25%
Black	6%	*Some College/Associates*	38%	*Slightly Liberal*	17%
Hispanic	6%	*4-year College Degree*	38%	*Moderate*	20%
Asian	8%	*Masters Degree*	8%	*Slightly Conservative*	11%
Other	3%	*Doctoral/Professional*	3%	*Conservative*	11%
Parent	38%			*Extremely Conservative*	4%