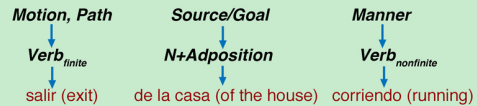# PATH SALIENCE IN MOTION EVENTS FROM VERBAL AND VISUAL LANGUAGES
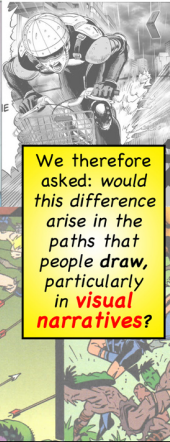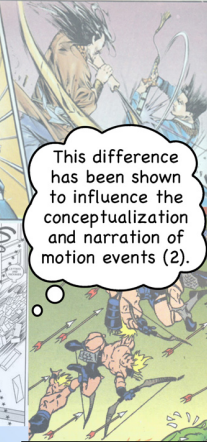
Neil Cohn, Vivian Wong, Kaitlin Pederson & Ryan Taylor • Tilburg University

**Languages** differ in the way they convey **paths**, encoded in either the **verb**...

Verb-framed (V-languages)
(Spanish, French, Japanese, Korean, Hebrew)

Motion, Path
$Verb_{finite}$
salir (exit)

Source/Goal
N+Adposition
de la casa (of the house)

Manner
$Verb_{nonfinite}$
corriendo (running)

...or a "**satellite**" (1):

Satellite-framed (S-languages)
(English, German, Dutch, Mandarin)

Motion, Manner
$Verb_{finite}$
go, run

Path
Satellite
out

Source/Goal
N+Adposition
of the house

Because S-languages **draw focus** to paths, they increase their **salience** in motion events.

This difference has been shown to influence the conceptualization and narration of motion events (2).

We therefore asked: would this difference arise in the paths that people **draw**, particularly in **visual narratives**?
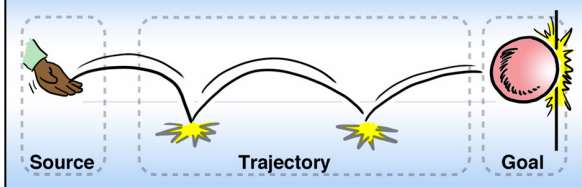
Tversky and Chow (2009) suggested such a difference in participant ratings of how "active" comic panels were from different cultures (3).
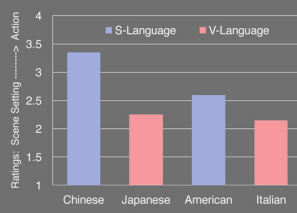
However, they examined a limited corpus, and did not directly examine the depiction of paths...

We thus coded the components of paths directly in the panels of **35 comics** from around the world.

Source — Trajectory — Goal

| Comic type	Continent	Language	Language type	Total pages	Total panels	Panels/page
American Mainstream	America	English	S-language	106	541	5.16
OEL Manga	America	English	S-language	137	768	5.62
Chinese manhua	Asia	Mandarin	S-language	131	772	5.92
German comics	Europe	German	S-language	136	772	5.78
French bande desinée	Europe	French	S-language	100	769	7.73
Japanese manga	Asia	Japanese	V-language	106	563	5.62
Korean manhwa	Asia	Korean	V-language	118	579	5.2
TOTAL				834	4,763	5.86

Overall, **trajectories** appeared more than **goals**, and both more than sources. This aligns with findings that paths' endpoints are more **salient** than starting points in verbal language, perception, and attention (4).

Also, trajectories and goals appeared more in S- than V-languages, suggesting an influence of authors' spoken languages.
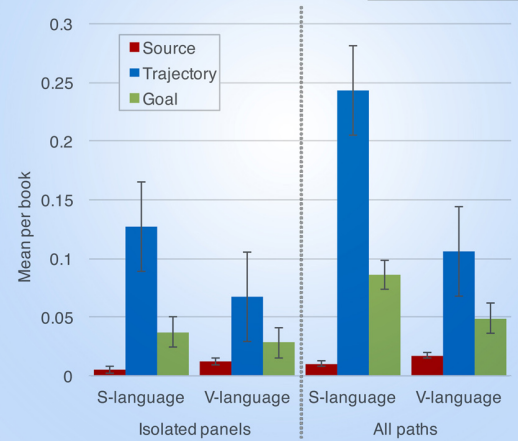
Despite our finding of differences between comic panels on the basis of spoken language typology, we found no differences based on the comics' continent of origin. However, some interesting results did appear...
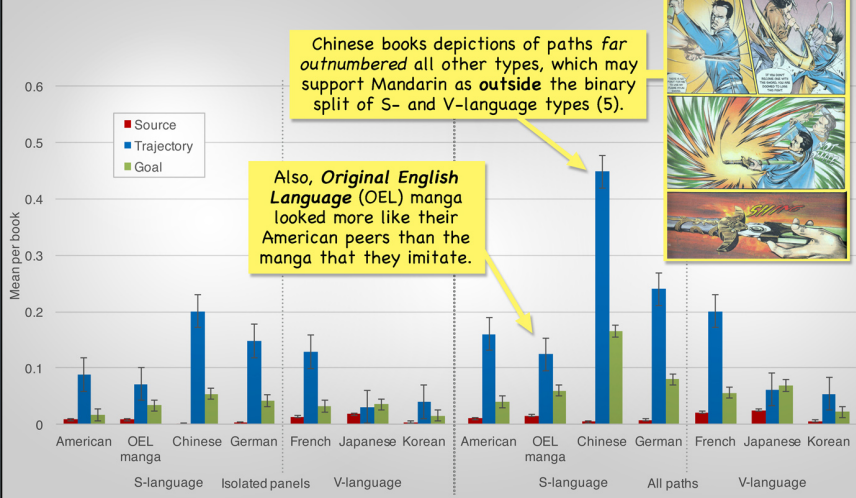
Chinese books depictions of paths far outnumbered all other types, which may support Mandarin as **outside** the binary split of S- and V-language types (5).

Also, *Original English Language* (OEL) manga looked more like their American peers than the manga that they imitate.

These findings support that a speaker's *conceptualization* of paths from their spoken language may **influence** the graphic depiction of paths they draw.
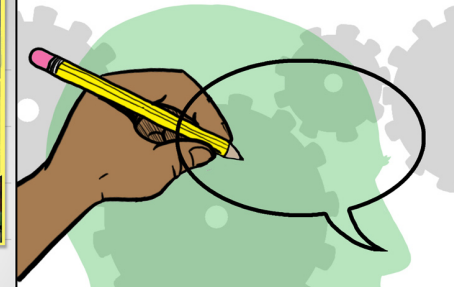
REFERENCES
(1) Talmy 1985. Lexicalization patterns.
(2) Slobin 2000. Verbalized events.
(3) Tversky & Chow. 2009. Comics. Psychonomics, Boston
(4) Regier. 1996. *The human semantic potential*
(5) Chen and Guo 2009. Motion events in Chinese novels.

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