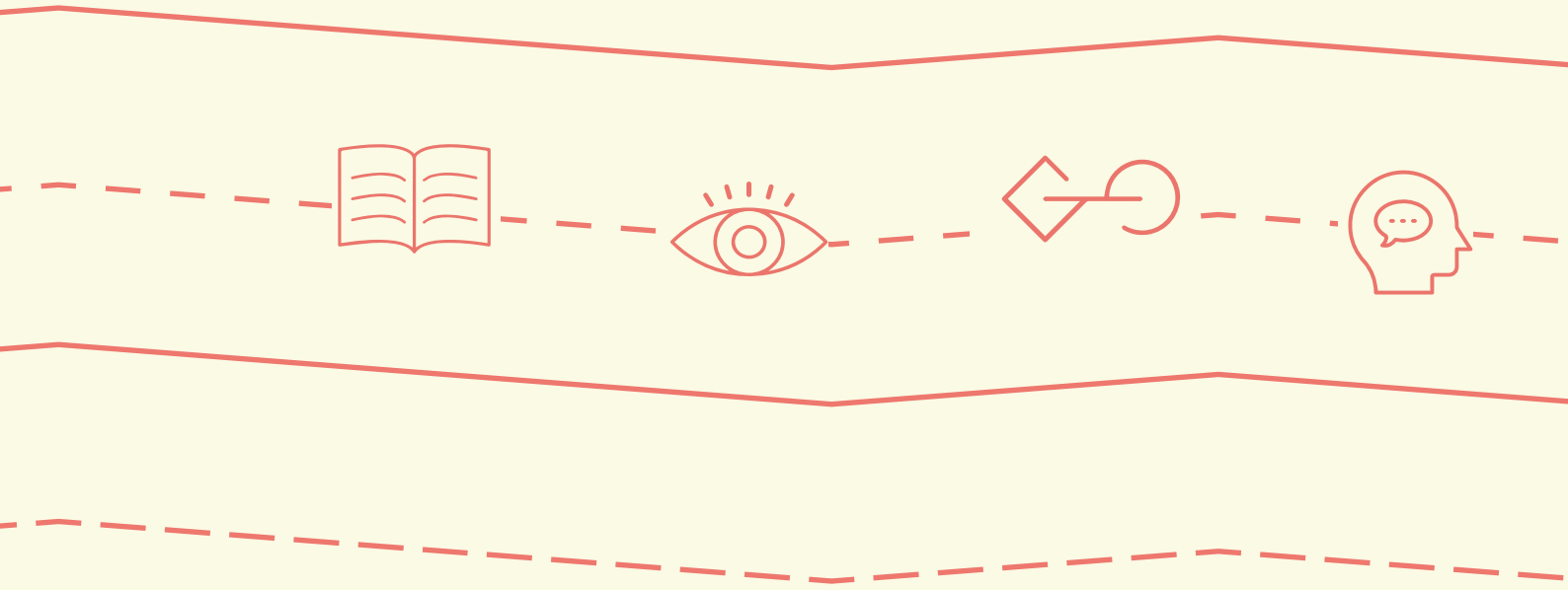
PsychEd-Up Reading II

Lengua Extranjera

Carolina Mahler



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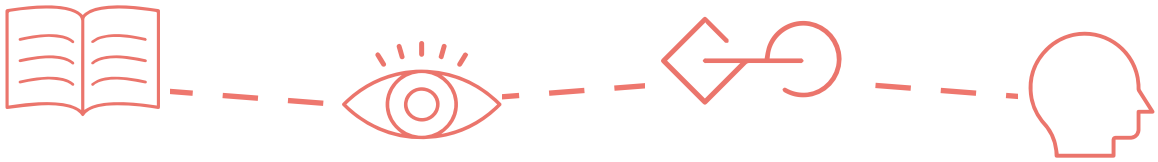

PsychEd-Up Reading II
Cuaderno de cátedra
Lengua Extranjera - Segundo Cuatrimestre

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Licenciatura en Psicopedagogía
Facultad de Educación y Salud
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Cartel que indica “love to learn”.

https://unsplash.com/es/fotos/me-encantaria-aprender-la-senalizacion-a-lapiz-en-la-pared-cerca-del-hombre-que-camina-WE_Kv_ZB1l0

UNIDAD 1

Perspectivas filosófico-cognitivas del desarrollo

Estrategia de lecto-comprensión: *identifying topic sentences* in a paragraph

Identificación de las oraciones de tópicos en los párrafos

Reciclamos algunos saberes previos: ¿cuál es la diferencia entre una frase, una oración, un párrafo y un texto?

Tomemos nota de algunas cuestiones clave para unificar criterios conceptuales durante las discusiones y clarificaciones en clase. Aquí podés registrar definiciones y sus correspondientes ejemplos:

• *Frase:* _____

_____

p. ej., una frase sustantiva es _____

_____

• *Cláusula:* Estructura oracional con un verbo conjugado. Una oración simple es una cláusula.). En un texto escrito, identificamos una oración porque _____

_____

• *Oración:* Puede ser una cláusula o un complejo clausular (una o varias cláusulas). En un texto escrito, identificamos una oración porque

_____

_____

• *Párrafo:*

_____

_____

- *Texto:*

De las oraciones al párrafo (y al texto): la *oración de tópico* o *topic sentence*

Una **oración de tópico** o ***topic sentence*** es una oración que comprime la información y el modo en que va a ser tratado el contenido del párrafo. Por lo tanto, tal estructura oracional nos permite vislumbrar lo que trata la totalidad del párrafo en la que se encuentra. Identificarla puede ser muy útil para formular hipótesis y predecir correctamente las ideas en un párrafo. Asimismo, identificar cada una de las oraciones de tópico en un texto nos puede dar pistas sobre la jerarquización de la información y sobre el foco y fondo de las discusiones en el texto completo.

Este tipo de oración prevalece en los textos académicos, en los que priman los objetivos de claridad y estructura organizada del contenido. Es habitual encontrar las *topic sentences* al comienzo del párrafo, lo que permite adelantar y prepararnos para su contenido, ya que, como se ha mencionado, funciona como una versión resumida de todo el párrafo. Pero también nos prepara para la lectura del resto del texto, como veremos a continuación.

Relación entre la oración de tópico y el párrafo.

Podemos tomar el párrafo como punto de partida. Si el párrafo está bien escrito y planificado -como debería, en el discurso científico-académico- nos podemos preguntar:

- *What is the paragraph about?* Es decir, ¿de qué trata el párrafo?

La *topic sentence* lo indica.

• *What about that topic sentence?* Es decir, ¿qué más hay para decir o para leer al respecto? Indicado en las demás oraciones.

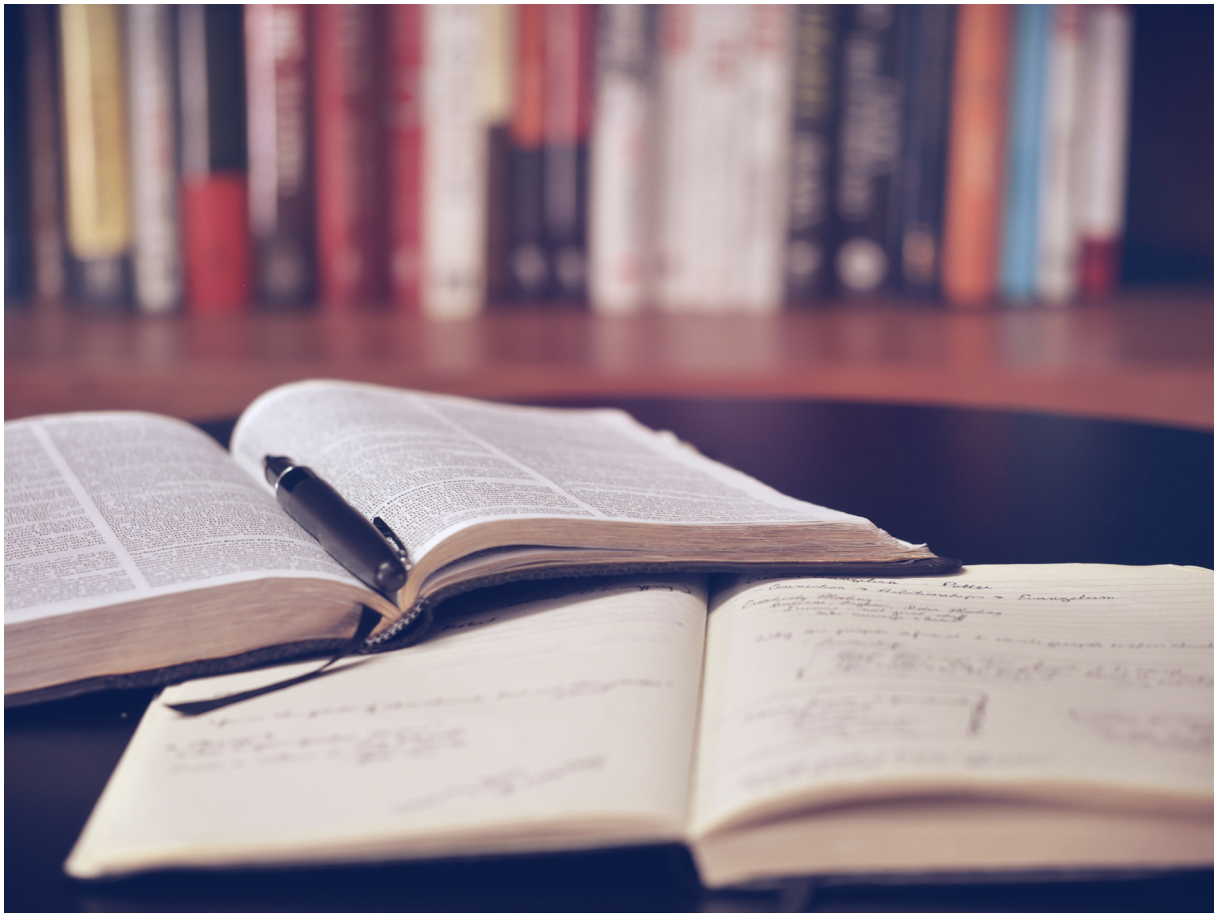
Relación entre la oración de tópico y el texto completo:

En los textos académicos[1] , hay probabilidad de que **la primera oración de cada uno de los párrafos sea la oración de tópico.** Vale la pena verificarlo, porque no hay garantía de que así sea, dado que les diferentes autores escriben con diferentes estilos. Detectar las oraciones de tópico en el orden en que aparecen a lo largo del texto completo contribuye a comprender todo el texto, rápida y esquemáticamente. Esto se debe a que cada *topic sentence* es la oración principal de cada párrafo, como se ha dicho, y cada párrafo sucesivo es un eslabón en la cadena textual. Así, verificar *cuál es la topic sentence* de cada párrafo nos ayuda a conectar cada una de sus ideas con la totalidad del texto.

La verificación de cuáles son las oraciones de tópico en un texto necesariamente ocurre como un tipo de ***scanning***, una estrategia lectora que demanda una lectura cuidadosa, aprendida en Lengua Extranjera 1. En tal sentido, la proponemos como práctica motivada e intencionada, a la vez que autorreflexiva y consciente, articulada como dentro de los pasos o fases de la lecto-comprensión.

1. Vale aclarar que no habría que esperar que aparezcan oraciones de tópico en géneros literarios tales como novelas, relatos o poemas, que se escriben con otro formato y con otros fines, para los cuales sus autores no se apoyan en la relación entre oración temática-párrafo-texto.

Libro y apunte abiertos.



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ACTIVIDAD 1

1. Prelectura:

a) ¿Qué recordás sobre el *conductismo* y el *cognitivismo* (ideas, argumentos, representantes más reconocides, etc.)?[2] Vale incluir aquí vocabulario específico en inglés que recuerdes:

_____

_____

_____

b) ¿Qué tipo de *genre* (género del discurso) es una reseña o *review*, y cuáles serían sus características o requerimientos de género? Buscá pistas en el encabezado a continuación:

_____

_____

_____

REVIEWS

Verbal behavior. By B. F. SKINNER. (The Century Psychology Series.) Pp. viii, 478. New York: Appleton-Century-Crofts, Inc., 1957.

Reviewed by NOAM CHOMSKY, Massachusetts Institute of Technology and Institute for Advanced Study

2. Para aprender vocabulario psicológico en inglés: los *Open Yale courses* son cursos de grado grabados a lo largo del dictado de distintas materias en la universidad de Yale. El curso introductorio a la Psicología está disponible libremente en https://www.youtube.com/watch?v=P3FKHH2RzjI&list=PL6A08EB4EEFF3E91F (20 clases).

2. On the fly:

En este paso, leé sucesivamente la primera oración de cada párrafo (solo la primera oración). Intenta formular una hipótesis sobre qué trata el extracto.

1. A great many linguists and philosophers concerned with language have expressed the hope that their studies might ultimately be embedded in a framework provided by behaviorist psychology, and that refractory areas of investigation, particularly those in which meaning is involved, will in this way be opened up to fruitful exploration. Since this volume is the first large-scale attempt to incorporate the major aspects of linguistic behavior within a behaviorist framework, it merits and will undoubtedly receive careful attention. Skinner is noted for his contributions to the study of animal behavior. The book under review is the product of study of linguistic behavior extending over more than twenty years. Earlier versions of it have been fairly widely circulated, and there are quite a few references in the psychological literature to its major ideas.

The problem to which this book is addressed is that of giving a 'functional analysis' of verbal behavior. By functional analysis, Skinner means identification of the variables that control this behavior and specification of how they interact to determine a particular verbal response. Furthermore, the controlling variables are to be described completely in terms of such notions as stimulus, reinforcement, deprivation, which have been given a reasonably clear meaning in animal experimentation. In other words, the goal of the book is to provide a way to predict and

control verbal behavior by observing and manipulating the physical environment of the speaker.

Skinner feels that recent advances in the laboratory study of animal behavior permit us to approach this problem with a certain optimism, since 'the basic processes and relations which give verbal behavior its special characteristics are now fairly well understood... the results [of this experimental work] have been surprisingly free of species restrictions. Recent work has shown that the methods can be extended to human behavior without serious modification.

[...]

Skinner's thesis is that external factors consisting of present stimulation and the history of reinforcement (in particular the frequency, arrangement, and withholding of reinforcing stimuli) are of overwhelming importance, and that the general principles revealed in laboratory studies of these phenomena provide the basis for understanding the complexities of verbal behavior. He confidently and repeatedly voices his claim to have demonstrated that the contribution of the speaker is quite trivial and elementary, and that precise prediction of verbal behavior involves only specification of the few external factors that he has isolated experimentally with lower organisms.

Careful study of this book (and of the research on which it draws) reveals, however, that these astonishing claims are far from justified. It indicates, furthermore, that the insights that have been achieved in the laboratories of the reinforcement theorist, though quite genuine, can be applied to complex human behavior only in the most gross and superficial way, and that speculative attempts to discuss linguistic behavior in these terms alone omit from consideration factors of fundamental importance that are, no doubt, amenable to

scientific study, although their specific character cannot at present be precisely formulated. Since Skinner's work is the most extensive attempt to accommodate human behavior involving higher mental faculties within a strict behaviorist schema of the type that has attracted many linguists and philosophers, as well as psychologists, a detailed documentation is of independent interest. The magnitude of the failure of this attempt to account for verbal behavior serves as a kind of measure of the importance of the factors omitted from consideration, and an indication of how little is really known about this remarkably complex phenomenon.

The force of Skinner's argument lies in the enormous wealth and range of examples for which he proposes a functional analysis. The only way to evaluate the success of his program and the correctness of his basic assumptions about verbal behavior is to review these examples in detail and to determine the precise character of the concepts in terms of which the functional analysis is presented. §2 of this review describes the experimental context with respect to which these concepts are originally defined. §§3-4 deal with the basic concepts 'stimulus', 'response', and 'reinforcement', §§6-10 with the new descriptive machinery developed specifically for the description of verbal behavior. In §5 we consider the status of the fundamental claim, drawn from the laboratory, which serves as the basis for the analogic guesses about human behavior that have been proposed by many psychologists. The final section (§11) will consider some ways in which further linguistic work may play a part in clarifying some of these problems.

Chomsky, N. (1959). "A Review of B. F. Skinner's Verbal Behavior". *Language,* 35, 1, 26-58.

Lee el extracto completo (*skimming*) y ratifica o rectifica la hipótesis sobre la idea central del texto.

3. Poslectura

1. Realiza una o varias lecturas más cuidadosas (*scanning*). Volvé a leer las primeras oraciones y consideralas a la luz de cada párrafo ¿eran, efectivamente, sus oraciones de tópico? Justifica.

Piezas que indican “read more”.

https://unsplash.com/es/fotos/lee-mas-vcF5y2Edm6A

Reference II

La **referencia** es un fenómeno que se establece a partir de un elemento léxico, **vacío** de un contenido preciso por sí solo, y que orienta a les lectores (u oyentes) a *cargarlo* o *llenarlo* de **significado.** Ese elemento puede tener variadas funciones léxico-gramaticales, sin embargo siempre funciona para *señalar algo más*, algo que no es esa palabra o frase por sí misma. En el siguiente ejemplo, el elemento referencial es el pronombre personal "I" que se llena de significado debido a que señala al *hablante en el mundo*. En esta oración, "I" señala al hablante:

I'm an EP student at the School of Education and Health, UPC.

Otras veces, la referencia parte de un elemento léxico que señala otro elemento léxico *dentro del propio texto*. Esto es muy frecuente: nos referimos no solo al mundo como algo externo al lenguaje sino también a lo que decimos, hacia dentro del lenguaje. Esta es una manera como el discurso se vuelve sobre sí mismo. En el discurso académico, sobresalen los conceptos técnicos y los nombres que les autores les han dado a los fenómenos que pueden ser observados, medidos, cotejados, indagados, etc. en parte gracias a que **a)** tienen un nombre – porque se les ha nombrado, y, en consecuencia, **b)** podemos volver a referirnos a esos nombres de conceptos y fenómenos más fácilmente. La manera como nos referimos a estos fenómenos es vital para comprenderlos. Como se ha dicho, estos elementos referenciales pueden ser de cualquier tipo, aunque sobresalen los deícticos (señaladores) *pronombres* y las *frases sustantivas* (AKA grupos nominales).

Cuando la referencia es textual en un texto académico, el elemento vacío de contenido puede referir a algo, p. ej., una idea, o a alguien, p. ej., mediante una cita, que se realiza convencionalmente (p. ej., las normas APA). Esa referencia se resuelve o se carga de significado cuando les lectores "buscan" y resuelven cómo llenar de contenido ese elemento vacío. Si el elemento señala hacia atrás, vgr. *antes* en el texto, decimos que la referencia es

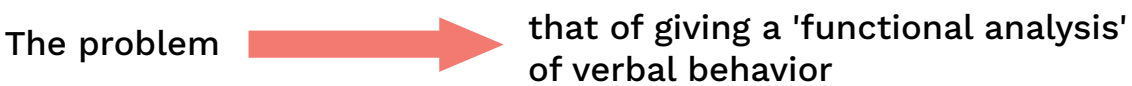
anafórica. Si el elemento señala hacia adelante, significa que deberemos aguardar hasta comprender de qué se está hablando hasta más tarde o después en el texto – esa referencia se denomina ***catafórica.*** La estrategia consiste en buscar **el elemento más cercano que coincida en género y número** con la palabra o frase referencial. Ejemplos:

Referencia anafórica:

> *Since this volume is the first large-scale attempt to incorporate the major aspects of linguistic behavior within a behaviorist framework,* **it** *merits and will undoubtedly receive careful attention.*

Referencia catafórica:

> The problem to which this book is addressed is that of giving a 'functional analysis' of verbal behavior.



Así, las palabras o frases referenciales son un recurso retórico que permite crear **cohesión** a lo largo del texto, esa suerte de tejido que nos permite seguir hablando o escribiendo de las mismas cosas, ideas, personas, etc. de las que hemos venido hablando. Distinguir la referencia nos permite comprender cómo se reintroducen, manipulan o anticipan contenidos o significados a lo largo de los textos, evitando redundancia, haciendo una referencia más interesante, etc.

Algunas palabras con función referencial son, como se ha mencionado, los pronombres personales sujeto y objeto (p. ej., *it/it, they/them, she/her,* etc.) y los adjetivos y pronombres posesivos (p. ej., *my/mine, it/its, our/ours, his/his, her/hers, their/theirs*).

Son frecuentes *this, that, these y those,* para señalar proximidad o lejanía tanto textual como epistémica. Es útil notar que *this* y *that* se utilizan para singular (p. ej., Chomsky doesn't agree with *this* idea.) o incontables (Hurley dismantles *that*.), pero *these* y *those* siempre refieren a plurales (vgr. estos/estas y aquellos/aquellas).

Son de mucha utilidad para organizar el discurso *the former* y *the latter* cuando se mencionan dos ideas o dos personas seguidas y deseamos distinguir *la primera mencionada (the former) de la última mencionada (the latter)*. *Respectively* se usa para referir primero a una cosa y luego otra, en el orden en que fueron presentadas.

Para reunir y no distinguir entre dos elementos mencionados, habitualmente se utiliza *both*.

También son muy frecuentes *who - whom* (que refiere estrictamente a personas), *why, which* y *that* que funcionan como pronombres en cláusulas relativas. Cabe destacar que estos habitualmente se vinculan con *all, some y none,* en frases tales como *all of that, some of which y none of whom*.

One (singular) y *ones* (plural) refieren siempre a sustantivos o frases sustantivas, mientras que *such* puede servir para introducir un ejemplo de un tipo de cosa.

Pero hay infinitas otras expresiones posibles, y les escritores de los textos que leemos son muy creatives, en el sentido de que podrían utilizar expresiones novedosas para referir a lo que elles mismes dicen en sus textos.

2. Especificá a **qué** o **a quién refieren** los ítems en negrita y añadí si la referencia se resuelve en el mundo (referencia externa) o en el texto (referencia interna). Solo en este último caso, especificá RA anafórica (si el referente está antes de la expresión en negrita) o RC catafórica (si el referente está después), usando comillas, dado que vas a extraer la expresión puntual referida. Junto a la expresión en comillas, traducí o elaborá en castellano cada expresión referida.

Algunas de las oraciones que siguen ofrecen más de un recurso referencial. Para realizar este ejercicio, necesitás volver a ver cada caso en su contexto, por lo que necesitarás tener el texto completo a la vista.

a) The book under review is the product of study of linguistic behavior extending over more than twenty years.

_____

_____

b) By functional analysis, Skinner means identification of the variables **that** control **this** behavior and specification of how they interact to determine a particular verbal response.

_____

_____

c) Furthermore, the controlling variables are to be described completely in terms of **such** notions as stimulus, reinforcement, deprivation, **which** have been given a reasonably clear meaning in animal experimentation.

_____

_____

d) In other words, the goal of **the book** is to provide a way to predict and control verbal behavior by observing and manipulating the physical environment of the speaker.

e) Recent work has shown that **the methods** can be extended to human behavior without serious modification.

f) He confidently and repeatedly voices **his** claim to have demonstrated that the contribution of the speaker is quite trivial and elementary.

g) It indicates, furthermore, that the insights that have been achieved in the laboratories of the reinforcement theorist, though quite genuine, can be applied to complex human behavior only in the most gross and superficial way.

h) The magnitude of the failure of this attempt to account for verbal behavior serves as a kind of measure of the importance of the factors omitted from consideration, and an indication of how little is really known about this remarkably complex phenomenon.

i) The only way to evaluate the success of **his** program and the correctness of his basic assumptions about verbal behavior is to review these examples in detail and to determine the precise character of the concepts in terms of **which** the functional analysis is presented.

j) §2 **of this review** describes the experimental context with respect to **which** these concepts are originally defined.

k) In §5 **we** consider the status of the fundamental claim, drawn from the laboratory, **which** serves as the basis for the analogic guesses about human behavior that have been proposed by **many psychologists.**

3. Interpretación

3. ¿En qué sentido se puede afirmar que el texto anterior es argumentativo? ¿Cuáles características de la argumentación podés identificar a lo largo del extracto? Utiliza este recurso[3] para justificar tu respuesta: http://ve.scielo.org/scielo.php?script=sci_arttext&pid=S1315-95182008000100013

4. ¿Cómo se posicionan Chomsky y Skinner en este texto? Justifica citando frases o secciones del texto.

3. Fuente: Serrano de Moreno, Stella. (2008). Composición de textos argumentativos: Una aproximación didáctica. Revista de Ciencias Sociales, 14(1), 149-161.

4. Vocabulary

Explica o define el significado de las siguientes palabras o expresiones:

a) Ultimately

_____

b) Embedded

_____

c) Verbal behavior

_____

d) Wealth

_____

e) Range

_____

f) Stimulus

_____

g) Response

_____

h) Reinforcement

_____

6) Linking words. Rastrea todo el texto y busca los conectores lógicos. ¿Encontraste conectores lógicos que no conocías antes? ¿Encontraste conectores lógicos que ya aprendiste?

Reescribilos aquí y menciona el tipo de conexión lógica según cómo se utiliza cada uno en su contexto:

7) ¿Para quiénes se escribe este texto? Es decir, ¿quién es la audiencia ideal de este texto? ¿Qué te hace inferir que esa es la audiencia ideal?

Fuentes externas

Más sobre **conectores** y **marcadores de discurso**, teoría y práctica:

- https://warwick.ac.uk/fac/soc/al/globalpad/openhouse/academicenglishskills/grammar/discourse/
- https://staff.washington.edu/marynell/grammar/logicalconnectors.html
- https://www.englishgrammar.org/discourse-markers-exercise/
- https://agendaweb.org/grammar/conjunctions.html
- https://www.englishgrammar.org/sentence-connectors-exercise-2/

También podés consultar los libros en la biblioteca de la FES, algunos de varios más son:

- Huddleston, R. (1986). *Introduction to the Grammar of English.* (Cambridge Textbooks in Linguistics.) Cambridge University Press.
- McArthur, T. (Ed.) (1992). *The Oxford Companion to the English Language.* Oxford University Press.
- Diccionarios bilingües (español-inglés) y monolingües (inglés-inglés)

Una computadora portátil encima de una mesa junto a una taza de café.

https://unsplash.com/es/fotos/una-computadora-portatil-sentada-encima-de-una-mesa-junto-a-una-taza-de-cafe-rXvXcjsxp3g

ACTIVIDAD 2

1. Prelectura

A continuación, un extracto que retoma varias ideas filosóficas acerca de la inteligencia humana y cómo han sido concebidas en la contemporaneidad. ¿Qué sugiere el título?

_____

_____

2.On the fly:

a) ¿Cuál es el tema principal del resumen?

_____

_____

b) Lee también la sección llamada *"The classical sandwich and how to resist it"* ¿el sandwich mencionado se puede comer? Are we zombies?! :)

_____

_____

c) ¿Qué tipo de relación hay entre el *abstract* y la sección que sigue?

_____

_____

Perception and action: alternative views

ABSTRACT. A traditional view of perception and action makes two assumptions: that the causal flow between perception and action is primarily linear or one-way, and that they are merely instrumentally related to each other, so that each is a means to the other. Either or both of these assumptions can be rejected. Behaviorism rejects the instrumental but not the one-way aspect of the traditional view, thus leaving itself open to charges of verificationism. Ecological views reject the one-way aspect but not the instrumental aspect of the traditional view, so that perception and action are seen as instrumentally interdependent. It is argued here that a better alternative is to reject both assumptions, resulting in a two-level interdependence view in which perception and action co-depend on dynamically circular subpersonal relations and as a result may be more than merely instrumentally interdependent. This is illustrated by reference to motor theories of perception and control theories of action.

The classical sandwich and how to resist it

A familiar mainstream view of the mind has three aspects.

First, perception and action are seen as separate from each other and as peripheral.

Second, thought or cognition is seen as the central core of the mind. The mind decomposes vertically into modules: cognition interfaces between perception and action. Perception and action are not just separate from one another, but also separate from the higher processes of cognition. The mind is a kind of sandwich, and cognition is the filling.

Third, not only is cognition central and distinct from peripheral sensorimotor processes, but the center is classical 'at the right level of description'. A cluster of related properties of cognition –compositionality, systematicity, productivity, binding, etc.,– are to be explained classically: in terms of processes involving symbols and recombinant syntactic structure. The subpersonal processes that explain the conceptual structure of thought mirror that structure syntactically. There is an isomorphism between contents and vehicles, or what Davies calls causal systematicity (see and cf. Davies 1991a; Fodor and Pylyshyn 1988, etc). The mental sandwich has a classical filling. Nonclassical connectionist networks that lack context-free symbols and syntactic structure may be apt for modelling peripheral, sensorimotor functions. But they cannot explain the distinctive structural properties of thought at the level of cognitive significance. They could at best model the brain's distributed implementation of classical cognitive processing.

There are several ways to resist the classical sandwich view of the mind. Working backward, we can ask, first: Is cognitive processing really classical? Second: Is cognitive processing really central and distinct from sensorimotor processing? And third: Are perception and action really peripheral and separate from one another?

The issue about classical structure is the most familiar. Can connectionism account for the compositionality of thought without internal context-free symbols to combine and recombine within syntactic structures? Would that imply behaviorism? Would it mean that thought as we conceive it is eliminated? (See and compare: Fodor and Pylyshyn 1988; Smolensky 1988; Van Gelder 1990; Clark 1990a, 1991; Davies 1990, 1991a; Ramsey et al. 1990; Stich 1991, 1996; Greenwood 1991, etc).

The second issue, about centrality, is less familiar, but is getting more attention lately. Some examples: Cognition and sensorimotor control are often assumed to belong to entirely different categories, but Patricia Churchland urges that they should not be, and that to understand the emergence and dynamics of cognitive processes we may need to understand their origins in sensorimotor control processes (1986, p. 451; see also Jackendoff 1987, pp. 271–2; Hutchins 1995, pp. 292, 316, 364–6, etc.). Dynamic systems approaches to the mind aim to show how cognition emerges in development from cycles of perception, action, perception (see, for example, Thelen and Smith 1994, p. 129; Port and van Gelder 1995, pp. 96. 150, etc.). Neuropsychologist Edoardo Bisiach notes how cognitive processes and reasoning can be entrapped by sensorimotor disorders, as in the case of a left-neglect patient who claimed of her left hand that it did not belong to her, though she readily admitted that her left shoulder was part of her body. What about the bits in between hand and shoulder? She inferred that her left arm and elbow were part of her body, given, as she said, the evident continuity of these members with her shoulder. But she was elusive about the forearm, and persisted in denying ownership of the left hand (see Bisiach and Geminiani 1991; Bisiach 1988b).

The third line of resistance to the classical sandwich disputes the separateness of perception and action rather than focussing on cognition and its purported classical or central character. Instead, the third line of resistance works from the outside in. It focuses on the supposed periphery, and criticizes the traditional conception of perception and action. It is this third line of resistance that I want to pursue here.

Hurley, S. (2001). *Perception and action: Alternative views. Synthese,* 129, 3-40.

3. Poslectura

1. ¿Cuál es el propósito de este texto?

_____

_____

_____

_____

2. Algunos pasos o momentos posibles en el desarrollo de un *abstract* (al que típicamente le sigue una sección introductoria o un capítulo introductorio) son:

- Definiciones canónicas o tradicionales
- Definiciones alternativas
- Problemas o cuestiones emergentes
- Métodos - materiales

a) Mediante corchetes, marcá los momentos o pasos que encuentres en el texto.

b) Al leer, hallamos evidencias lingüísticas o "huellas" del texto que indican cada uno de los pasos o momentos en el texto. Desde la perspectiva de quien escribió el texto, estas evidencias son los mecanismos lingüísticos-discursivos que la autora ha seleccionado para guiar o dirigir la atención de una sección a otra, o de un paso a otro en el texto. Como lectores, podemos ver y pensar esas evidencias lingüísticas como huellas o marcas que dejó su autora. ¿Cuáles son las evidencias lingüísticas, (aquellos mecanismos seleccionados por Hurley) que dan cuenta de los momentos o los pasos en este fragmento? Explicitalos junto a cada paso en el *abstract*.

4. Vocabulary

Define los siguientes ítems lingüísticos y, además, explica la diferencia de significado en los casos donde se deba contrastar entre dos ítems lingüísticos (“vs.”):

Assumption:

Instrumental vs. instrumentally:

Either vs. both:

Charges:

Verificationism:

Argue:

Dynamic vs. dynamical vs. dynamics vs. dynamically:

3. ¿A qué refiere “this” en ***This*** *is illustrated by reference to motor theories of perception and control theories of action?*

A continuación, recuperaremos las ideas de **cláusula, oración y sus elementos.** Como se ha mencionado, una oración puede ser una estructura compleja, conformada por mini-oraciones o cláusulas en su interior. Siempre que haya un verbo principal, es decir, un verbo conjugado, podremos realizar el análisis de transitividad que sigue. Identificamos la cláusula si la estructura contiene un *tiempo verbal* (p. ej., Present Simple) o un *verbo modal* (p. ej., may, could, etc. + otro verbo), y por lo tanto funciona como una oración simple o como parte de un complejo clausular. Atención: las estructuras tales como la *frase* sustantiva o un gerundio no equivalen a cláusulas, porque no contienen por sí solas un verbo conjugado.

Para pensar: ¿Por qué es importante detectar los verbos conjugados o principales de una cláusula u oración? (hint: las frases no pueden ser **verdaderas** o **falsas**, mientras que las cláusulas y oraciones sí).

Como veremos a continuación, el *sistema de transitividad* es importante para nuestra lecto-comprensión, puesto que nos permite ver más allá del significado de las palabras. Nos permite notar cómo funcionan o cómo se utilizan los procesos o verbos sistemáticamente en los textos particulares.

El sistema de transitividad: análisis de oraciones

Les hablantes, escritores o quienes producimos textos de cualquier tipo (incluyendo híbridos entre el habla, la escritura, los *emojis*, distintas lenguas, etc.), seleccionamos **procesos** para presentar el entorno (el mundo o la realidad) con las opciones que tenemos en el sistema lingüístico. La Gramática (o Lingüística) Sistémico-Funcional propone explicar la organización de la oración[4] mediante tipos de procesos y roles de los participantes. Se trata de una manera de estudiar un sistema de significados, el de **transitividad** o tipos de procesos[5], tal como fue elegido por quienes escribieron los textos que vamos a intentar comprender.

Los tres componentes del sistema de transitividad son: *procesos, participantes* y *circunstancias*. El tipo de proceso se asocia a ciertos roles de les participantes, es decir, el mundo de las acciones, relaciones, participantes y circunstancias que dan contenido a un texto. Comprender los procesos de este modo permite entender que las acciones o estados no solo tienen un significado "de diccionario" sino que pueden ser agrupados según una clasificación simple que veremos enseguida.

1. Recordamos que cada palabra y cada frase utilizada en un texto es producto de la selección realizada por sus autores. ¿Cómo distinguimos los procesos

4. Fuente: Martínez Lirola, M. (2007). *Aspectos esenciales de la gramática sistémica funcional*. Universidad de Alicante.

5. En la terminología de la gramática tradicional, un proceso es equivalente a un verbo.

verbales? Se pueden distinguir los **procesos** *en el grupo verbal* de la oración. Decimos *grupo* o *sintagma verbal* porque este podría estar compuesto por una o varias palabras que funcionan como una estructura (frase) verbal.

A continuación presentamos los distintos *tipos* de procesos. Cada tipo de proceso está ilustrado con un ejemplo, en el que señalaremos tanto el *tipo de proceso* como sus *participantes* asociados:

- ***Materiales:*** son los procesos de acción en el mundo externo, por lo que debe haber una entidad que lleve a cabo dicha acción:

Jill	**arrived.**		
Actor	Proceso material		
My mother	**made**	**a cake.**	
Actor	Proceso material	Objeto	
I	**sent**	**Mary**	**an email**
Actor	Proceso material	Beneficiario	Objeto

- ***Mentales:*** se activan cuando pensamos o sentimos, en nuestro mundo interno de la conciencia.

She	**likes**	**orange juice**
They	**prefer**	**the postcognitive paradigm**
Senser	Proceso mental	fenómeno

- ***De comportamiento:*** a medio camino entre los materiales y los mentales. Normalmente tienen un matiz psicológico o fisiológico.

The dog	**sleeps**	**at home**
Behaver	Proceso de comportamiento	Circunstancial

I	**watch**	**the sunrise**	**everyday**
Behaver	Proceso de comportamiento	Extensión (D.O)	Circunstancia

- **Verbales:** *son procesos de dicción.* Muchas veces refieren a las afirmaciones realizadas por autores que son citados en los textos académicos.

She	**said**	**what she thought.**
Sayer	Proceso verbal	Dicción (verbiage)

- ***Existenciales:*** expresan que hay, había o habrá algo.

There is	**a problem**
Proceso existencial	Existente

- ***Relacionales:*** son los verbos que se utilizan para identificar y clasificar el mundo, es decir que este proceso cubre los diferentes modos en que la existencia ("being") se pueden expresar en inglés.

This classroom	**is**	**airy**
Portador	Proceso relacional	Atributo
Hurley	**is**	**a philosopher**
Token	Proceso relacional identificador	Value

Tipos de proceso (síntesis):

Desde el punto de vista de los participantes, los procesos materiales implican un agente llevando a cabo una acción intencionalmente, los procesos mentales son realizados por un ser sintiente que tiene percepciones, emociones o pensamientos, mientras que para los procesos comportamentales hay un participante cuyos procesos fisiológicos y psicológicos se manifiestan en posturas corporales y comportamientos. En los procesos verbales, los participantes enuncian o escriben algo, los procesos relacionales caracterizan o identifican algo, y, por último, los existenciales simplemente apuntan a la existencia de algo.

2. Los participantes aparecen en los grupos nominales de la oración, y varían según el tipo de proceso. Asumen diferentes roles, a saber:

Con un proceso material, podemos tener un participante Actor que realiza o lleva a cabo la acción, el Objeto ("Goal") que recibe la finalidad de la acción, la Extensión ("Range") indica la extensión o el campo de la actividad, Beneficiario ("Beneficiary") quien obtiene beneficio de la acción, y Receptor ("Recipient") es destinatario de la acción.

En los procesos mentales, “Senser” es quien siente, piensa o percibe de manera consciente, mientras que el Fenómeno (“Phenomenon”) indica aquello que es sentido, pensado o visto.

Para los procesos comportamentales, “Behaver” es quien realiza algún comportamiento.

En los procesos verbales, “Sayer” es responsable del proceso verbal, vale decir, quien dice algo, mientras que “Recipient” es a quien se dirige el proceso verbal, quien recibe la Dicción. La Dicción (“Verbiage”) es aquello que es dicho, un tipo de comportamiento verbal.

Para las oraciones con un proceso existencial, tendremos un Existente (“Existent”) como participante que aparece normalmente después de hay, hubo, etc.

Para los procesos relacionales, Portador (“Carrier”) es siempre un nombre o un grupo nominal del que predica algo el atributo, y el Atributo (“Attribute”) es un predicado del sujeto. “Token” o Caso es el elemento identificado en una oración atributiva ecuativa, y Valor (“Value”) es el elemento identificador en una oración atributiva ecuativa.

3. La selección de **circunstancias** se expresa a través de frases preposicionales y grupos adverbiales (in the evening, tomorrow, etc.).

Los matices expresados en las circunstancias, AKA *circunstanciales* son diversos: modo, manera, causa, lugar, etc.

El sistema de transitividad en la lecto-comprensión

Entender cada tipo de proceso nos muestra cómo les escritores de los textos eligen presentar los participantes que acompañan a cada verbo. Por ejemplo, por defecto se podría pensar que los participantes ACTORES de los procesos **materiales** son necesariamente personas humanas. Sin embargo, como vemos en la siguiente oración, hay dos formas de interpretar el verbo conjugado de la oración, o la frase verbal.

> ***A traditional view of perception and action*** *makes two assumptions: that the causal flow between perception and action is primarily linear or one-way, and that they are merely instrumentally related to each other, so that each is a means to the other.*

Una interpretación es que la autora del resumen, Hurley, presenta **"a traditional view of perception and action"** como participante ACTOR del proceso material "make", es decir, como agente.

Otra interpretación posible extiende la frase verbal a "makes two assumptions" como una idea completa. En este caso, se trataría de un proceso *mental*, dando como participante SENSER a la "perspectiva tradicional de la percepción y acción".

En las dos interpretaciones se ha representado a **"a traditional view of perception and action"** como humano. Pero, en el mundo real fuera del texto, se trata de una *posición* o una *perspectiva* (sobre la cognición y la acción), no de una persona que actúa o que piensa.

En ambos casos, si interpretamos tanto *make* como proceso material, o bien *make two assumptions* como proceso mental, esa "posición tradicional sobre la cognición y la acción" es interpretable como si tuviera algunos matices de humanidad, en el sentido de que pareciera que "una posición tradicional sobre la cognición y la acción" lleva a cabo actos en el mundo, o bien que opera con procesos mentales y sensaciones. Mínimamente, notar estas decisiones textuales debería abrir el debate sobre si una perspectiva filosófica puede ejercer acciones materiales en el mundo realmente. Además, deberíamos poner en cuestión la idea de que esta perspectiva filosófica pueda realizar inferencias por sí misma.

Poder detectar *esta forma de presentar una idea o postura,* tan habitual en los textos académicos, p. ej., como agente que incide o actúa en el mundo, o como ser que puede realizar inferencias, constituye una faceta más profunda de tu lecto-comprensión. Entran en tensión tus expectativas de qué es un agente con capacidades operativas y cognitivas y cómo de hecho se "construyen" en el texto que lees.

El caso es que de modo intuitivo tenemos expectativas sobre qué tipo de participantes acompañan a los distintos tipos de procesos. Por ejemplo, que un actor sea representado por una persona humana es la forma esperada, que también se denomina *forma no marcada*, que no sobresale. Hemos notado que en un texto particular, una idea o una perspectiva se presenta como actor. Esta es una forma inesperada o *marcada*, diferente de lo que esperábamos intuitivamente.

A- *Actividad:* Junto a cada participante, en el espacio en blanco ¿podés mencionar cuáles expectativas tendrías sobre cada tipo de participante?

B- Actividad de *aplicación:* rastrea cada tipo de proceso, participante y circunstancia en las oraciones que componen el *abstract*. Es importante que notes este proceso en cada cláusula, es decir, para cada verbo conjugado en la oración.

ACTIVIDAD 3

1.Prelectura

¿Qué audiencias (lectores meta) son típicas de los resúmenes? ¿Quiénes son típicamente quienes los escriben (autoría)? ¿Qué tipo de decisiones retóricas se suelen tomar al escribir un resumen, es decir, qué opciones tomó la persona que escribe para llegar adecuadamente a la audiencia? ¿Qué cosas no pueden faltar en un buen resumen? (Tip: → unidad 3)

Antes de leer, un poco de vocabulario y algo de predicción:

a) Sobre la palabra "amodal[6]": Amodal completion is the representation of those parts of the perceived object that we get no sensory stimulation from.

b) Considera todos los datos que te presenta el encabezado, ¿qué información lográs obtener de ellos?

6. Fuente: Iperception. 2018 Jul-Aug; 9(4): 2041669518788887. Published online 2018 Jul 31. doi: 10.1177/2041669518788887. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6083800/

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Grounded Cognition: Past, Present, and Future
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Abstract

Thirty years ago, grounded cognition had roots in philosophy, perception, cognitive linguistics, psycholinguistics, cognitive psychology, and cognitive neuropsychology. During the next 20 years, grounded cognition continued developing in these areas, and it also took new forms in robotics, cognitive ecology, cognitive neuroscience, and developmental psychology. In the past 10 years, research on grounded cognition has grown rapidly, especially in cognitive neuroscience, social neuroscience, cognitive psychology, social psychology, and developmental psychology.

Currently, grounded cognition appears to be achieving increased acceptance throughout cognitive science, shifting from relatively minor status to increasing importance. *Nevertheless*, researchers wonder *whether* grounded mechanisms lie at the heart of the cognitive system *or* are peripheral to classic symbolic mechanisms.

Although grounded cognition is currently dominated by demonstration experiments in the absence of well-developed theories, the area is likely to become increasingly theory driven over the next 30 years. Another likely development is the increased incorporation of grounding mechanisms into cognitive architectures and into accounts of classic cognitive phenomena. *As* this incorporation occurs, much functionality of these architectures and phenomena is likely to remain, along with many original mechanisms. Future theories of grounded cognition are likely to be heavily influenced by both cognitive neuroscience and social neuroscience, and also by developmental science and robotics. Aspects from the three major perspectives in cognitive science—classic symbolic architectures, statistical / dynamical systems, and grounded cognition—will probably be integrated increasingly in future theories, each capturing indispensable aspects of intelligence.

Keywords: Architectures; Embodiment; Grounding; Imagery; Knowledge; Mental simulation; Situated cognition; Symbolic operations

2.Poslectura

a) En el resumen, ¿hay partes que funcionan como Introducción, Materiales y métodos, Objetivos, Resultados, Discusión y Alcance de la investigación? Distinguilas entre corchetes usando los rótulos correspondientes.

b) Lee los títulos del artículo que sigue. ¿Cómo está estructurada la publicación? ¿Tiene relación con la estructura del resumen?

1. Introduction

According to classic theories, the core knowledge representations in cognition are amodal data structures processed independently of the brain's modal systems for perception, action, and introspection. From this perspective, the core representations in cognition differ from representations in modal systems, function according to different principles, and reside in a modular semantic system (Tulving, 1983). Grounded cognition is often defined negatively as the view that classic theories are incorrect: The core knowledge representations in cognition are not amodal data structures that exist independently of the brain's modal systems.

Instead—according to a positive definition of grounded cognition—the environment, situations, the body, and simulations in the brain's modal systems ground the central representations in cognition. From this perspective, the cognitive system utilizes the environment and the body as external informational structures that complement internal representations. *In turn,* internal representations have a situated character, implemented via simulations in the brain's modal systems, making them well suited for interfacing with external structures.

2. The past 30 years

Grounded cognition has a venerable history over two millennia, existing long before modern cognitive science. Prescientific accounts of the human mind, from ancient philosophers (e.g., Epicurus, 341–270BC / 1987), to British empiricists (e.g., Berkeley, 1982; Hume, 1978; Locke, 1959), to 20th-century philosophers (e.g., Price, 1953; Russell, 1919), assumed that modal images represent knowledge, analogous to current views. Even nativists (e.g., Kant, 1965; Reid, 1969) frequently discussed modal images in knowledge (among other constructs).

Around 30 years ago—peripheral to the amodal approaches that emerged from the Cognitive Revolution—grounded cognition took a variety of forms in cognitive science. In philosophy, Searle (1980) proposed the Chinese Room Problem as an example of how amodal representations in cognition are typically ungrounded. In cognitive linguistics, Lakoff and Johnson (1980) proposed conceptual metaphor theory, conjecturing that bodily experience grounds abstract concepts. In ecological optics, Gibson (1979) proposed that the environment plays important roles in supporting the internal processes underlying perception. In cognitive psychology, Paivio (1971), Shepard and Cooper (1982), and Kosslyn (1980) developed clever behavioral paradigms to demonstrate that perceptual representations implement mental imagery in higher cognition. In psycholinguistics, Bransford and Johnson (1973) and Clark and Marshall (1981) demonstrated that situations play central roles in establishing the semantics of sentences and texts, along with the pragmatics of common ground. In cognitive neuropsychology, Warrington and Shallice (1984) demonstrated that lesions in the brain's modal systems constitute one source of deficits in category knowledge, suggesting that modal systems play roles in representing knowledge. *Although* these lines of research captured significant interest in the cognitive science community, they had relatively little influence on the dominant amodal theories of the time.

Over the next 20 years, grounded cognition continued evolving, but again remained relatively peripheral. Philosophers continued to stress the seriousness of the grounding problem (e.g., Harnad, 1990). Cognitive linguists, such as Talmy (1983), Langacker (1987), and Fauconnier (1985), proposed cognitive grammars and mental spaces grounded in experience as accounts of language and thought. In cognitive ecology, Hutchins (1995) documented the distributed nature of cognition across the environment, situations, and agents. In robotics, Brooks (1991) and Kirsh (1991) advocated incorporating the environment and the body into a new generation of robots. In cognitive neuroscience, Kosslyn (1994)

and Jeannerod (1995) demonstrated that mental imagery arises in the brain's modal systems for perception and action, corroborating earlier behavioral research on imagery. In developmental psychology, Thelen and Smith (1994) demonstrated that the environment, the body, and the motor system play central roles in the development of intelligence. In cognitive psychology, Barsalou (1993, 1999) proposed that knowledge is grounded in a compositional system of perceptual symbols.

The past 10 years have witnessed an explosion of research on grounded cognition. *Not only* has the salience of this work increased dramatically, it has increasingly been viewed as challenging dominant theories. One of the most significant areas has been cognitive neuroscience, where researchers such as Martin (2001, 2007), Pulvermüller (1999, 2005), and Thompson-Schill (2003) performed neuroimaging on tasks that engage memory, knowledge, language, and thought. Of interest was the general finding that the brain's modal systems become active as people perform these tasks, suggesting that higher cognition is grounded in modal systems. In social neuroscience, researchers such as Rizzolatti and Craighero (2004) and Decety and Grèzes (2006) found that as nonhuman primates and humans perceive social situations, they run simulations in their motor and affective systems to comprehend social action, generate empathy, and engage in other social processes. In cognitive psychology, many researchers, including Glenberg (1997), Zwaan (2004), Gibbs (2006), Hegarty (2004), W. Prinz (1997), Wilson (2002), Wilson and Knoblich (2005), Rubin (2006), and Barsalou (2008a), found that sensory-motor variables affect diverse tasks associated with perception, action, memory, knowledge, language, and thought, implicating the brain's modal systems throughout cognition. Similarly in social psychology, many researchers found that manipulating bodily states for the face, head, arms, and torso causally affects higher cognitive processes, such as evaluation, decision making, and attribution (Barsalou, Niedenthal, Barbey, & Ruppert, 2003; Niedenthal, Barsalou, Winkielman, Krauth-

Gruber, & Ric, 2005). In developmental psychology, L. Smith (2005) (also L. Smith & Gasser, 2005) continued demonstrating that the environment and the body play central roles in the development of intelligence. In philosophy, researchers continued focusing on central roles of grounding in cognition (e.g., J. Prinz, 2002).

3. Current status

Empirical demonstrations of grounding across diverse areas and phenomena increase exponentially (e.g., Barsalou, 2008a; Gibbs, 2006; Pecher & Zwaan, 2005; Semin & Smith, 2008; de Vega, Glenberg, & Graesser, 2008). *As a result* of these accumulating demonstrations, there appears to be increasing awareness and acceptance that grounding is at least somewhat involved in higher cognition. There is *also* increased interest, *however*, in understanding the implications of these demonstrations for theory. One possibility is that grounding mechanisms play relatively peripheral, or even epiphenomenal, roles in higher cognition. Perhaps these mechanisms simply accompany the standard symbolic mechanisms in classic architectures, which causally determine processing. *Alternatively,* grounding mechanisms may play these causal roles themselves. The fact that manipulating grounding mechanisms in well-controlled laboratory experiments affects higher cognition suggests that these mechanisms play causal roles (Barsalou, 2008a, p. 632). Effects of transcranial magnetic stimulation on higher cognition further implicate the causal role of grounding mechanisms (e.g., Buccino et al., 2005; Pulvermüller, Hauk, Nikulin, & Ilmoniemi, 2005). Future research will undoubtedly focus increasingly on the causal roles of grounding mechanisms in cognition.

Another limitation of current work is the relative lack of formal and computational accounts. It is fair to say that current empirical research on grounded cognition heavily reflects demonstration experiments. *As* philosophers of science note, *when* a new area

emerges, demonstration experiments dominate to justify the area's importance. Eventually, mechanistic theories develop that stimulate new generations of research, distinguish between mechanistic accounts, and elaborate mechanistic accounts further. Mechanistic accounts of grounded cognition have existed for some time and continue to emerge increasingly (e.g., Cangelosi & Riga, 2006; Farah & McClelland, 1991; Feldman, 2006; Pezzulo & Calvi, in press; Plaut, 2002; Wennekers, Garagnani, & Pulvermüller, 2006). Some preexisting systems have much potential for development as grounded theories (e.g., O'Reilly & Norman, 2002; Ullman, Vidal-Naquet, & Sali, 2002). *In addition,* various preformal architectures have potential for development as computational systems (e.g., Damasio, 1989; Simmons & Barsalou, 2003). In general, though, it is clear that much further theoretical development remains, and that such developments will move the area forward significantly.

Another question of much current interest is: What's amodal in the brain? One possibility entertained widely at the moment is a mixed account, with a classic symbolic engine implementing core cognitive operations, and grounding mechanisms being epiphenomenal, or simply serving to interface core operations with the world. Another flavor of this account is that, instead of classic symbolic mechanisms, a statistical engine implements core cognitive operations, *again* with grounding mechanisms being peripheral. Another position articulated frequently is that amodal symbols are central in certain special domains, such as number and space. In these domains, amodal representations may integrate and stand for information across modalities, although another possibility is that modal representations are linked directly with no amodal representations intervening. Finally, another mixed approach—originating in Paivio's (1971) Dual Code Theory—is that language and simulation work together to produce human cognition (e.g., Barsalou, Santos, Simmons, & Wilson, 2008; Louwerse & Jeuniaux, 2008).

Other central issues currently include how the brain implements symbolic operations and abstract concepts, phenomena that might be difficult to explain from the grounded perspective. One possibility is that amodal symbols are required to implement symbolic operations, *such as* predication, argument binding, conceptual combination, recursion, and so forth. *Alternatively,* grounded theories offer ways of explaining symbolic operations via simulation mechanisms (e.g., Barsalou, 1999, 2005, 2008b). *As mentioned earlier*, conceptual metaphor theory explains abstract concepts as grounded in embodiment (e.g., Gibbs, 1994; Lakoff & Johnson, 1980, 1999). Another compatible possibility is that abstract concepts are grounded in simulations of introspective experience and situations (e.g., Barsalou, 1999; Barsalou & Wiemer-Hastings, 2005).

Finally, within the area of grounded cognition itself, there is considerable speculation that grounding will lead to significant new discoveries in relations between perception, action, and cognition. Traditionally, integrating perception, action, and cognition has been difficult, reflecting the grounding problem (e.g., Harnad, 1990; Searle, 1980). *If, however,* cognition heavily utilizes mechanisms for perception and action, then grounded accounts have potential to unify perception, action, and cognition in the brain. There is *also* speculation that grounding will lead to significant new understandings about representation and knowledge, and *also* about the development of intelligence.

4. The next 30 years

One prediction is that cognitive science will increasingly witness the integration of three major perspectives—classic symbolic architectures, statistical / dynamical systems, and grounded cognition—with competition between them decreasing. Aspects of classic symbolic architectures will remain because of the central role that symbolic operations play in human intelligence (e.g., Barsalou,

1999, 2005, 2008b). These aspects, however, will be integrated with statistical / dynamical mechanisms and be grounded in the brain's modal systems. Specifically, the functionality of classic architectures will remain but be implemented in statistical/dynamical and grounding mechanisms, changing not only how we think about symbolic processing but also how we implement it in artificial intelligence. Each perspective offers important insights into how the brain works and is indispensable for a complete and powerful account.

Another prediction is that grounding will eventually become a standard aspect of theories and no longer be controversial. Specifically, the environment, situations, bodies, and simulations will become increasingly integrated into theories and play increasingly central roles in them. *Furthermore,* grounding is likely to play causal, not epiphenomenal, roles. Because grounding mechanisms such as simulation have the potential to implement symbolic operations and represent knowledge, they are likely to play roles in implementing the core functionality of classic symbolic architectures.

As research on grounded cognition evolves, computational and formal accounts of grounding are likely to develop increasingly. *In parallel*, empirical research will become less demonstrational and increasingly theory driven. Future experiments are likely to play central roles in developing mechanistic accounts of grounding and in discriminating between them.

Another prediction—perhaps wishful thinking—is that the integration of grounding mechanisms into existing research will be relatively painless. From this perspective, the functionality of classic empirical phenomena such as similarity, analogical reasoning, Bayesian inference, and so forth is likely to remain largely the same. What is likely to change is that additional levels of explanation associated with grounding develop, replacing the original amodal

accounts of representation associated with these phenomena. A related prediction is that a similar evolution will occur for cognitive architectures. Much of the mechanistic structure and functionality of these architectures will remain, with grounding mechanisms replacing the corresponding amodal mechanisms.

To the extent that new grounded architectures develop, they are likely to heavily reflect influences from both cognitive neuroscience and social neuroscience. New architectures are also likely to incorporate mechanisms from existing computational accounts, to be heavily constrained by behavioral research, and to be influenced by developmental psychology. *Rather than* simply building an adult system, researchers will increasingly attempt to build infant systems that develop into fully intelligent systems (Smith, 2005; Smith & Gasser, 2005). *Finally, to the extent that* successful grounded architectures develop, they are likely to produce increasingly effective robots that provide good test beds for assessing these architectures (Barsalou, Breazeal, & Smith, 2007).

Barsalou, L. W. (2010). Grounded cognition: Past, present, and future. Topics in cognitive science, 2(4), 716-724

Notes

1.2. Introspection includes the internal perception of motivational states, affective states, goals, beliefs, cognitive operations, meta-cognition, and so forth. Researchers often refer to the research reviewed here as "embodied cognition." Although some of this research implicates the body as an important grounding mechanism, much other research implicates the modalities, the physical environment, and the social environment as important grounding mechanisms as well. Thus, referring to all this research as "embodied" cognition fails to capture the wide scope of grounding mechanisms, while

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Conectores de oraciones y párrafos II

Como sabemos, un texto no es un mero conjunto de oraciones. En un texto, tiene que haber una transición de una oración a la otra, y de un párrafo al otro, para que conforme un ensamble total. Las oraciones, como también los párrafos, deben unirse o ligarse de modo tal que las ideas "fluyan" con claridad, sin ambigüedades, de modo tal que el texto se comprenda del mismo modo en que fue concebido. Como escritores de un texto, p. ej., un TFL, es importante considerar a quiénes va dirigido, bajo la premisa de que debemos ser amigables y facilitar — no oscurecer — la inteligibilidad de la expresión escrita.

Como lectores, p. ej., de textos académicos tanto en inglés como en cualquier idioma, los conectores lógicos y los marcadores del discurso son un grato recurso para apoyarnos. Son indicios del tipo de relación entre distintas ideas en las oraciones y párrafos, y, por lo tanto, debemos rastrearlos para comprender el texto.

A continuación, algunas funciones conectivas y ejemplos típicos. Algunos marcadores están en itálicas en el texto. Encontralos para localizarlos en la categoría correspondiente:

Adición

in addition
and
similarly
likewise
as well as
besides
furthermore
also
moreover
then too
not only... but
even
besides
this/that

Secuencia

first(ly) initially
second(ly) etac.
to begin with
then
next
earlier/later
after this/that
following this/that
afterwards

Consecuencia

as a result
thus
so
therefore
consequently
it follows that
thereby
eventually
then
in that case
admittedly

Contraste

however
on the other hand
despite
in spite of
though
although
but
on the contrary
otherwise
yet
instead of
rather
whereas
nonetheless
even though
compared with
in contrast
alternatively

Certeza

obviously
certainly
plainly
of course
undoubtedly

Condición

if
unless
whether
provided that
for
so that
whether
depending on

Definición

refers to
means
that is
consists of

Resumen

in conclusion
finally
to sum up
to conclude
lastly
to recapitulate
in short

Ejemplo

for instance
one example
for example
just as
in particular
such as
namely
to illustrate

Razón

since
as
so
because (of)
due to
owing to
the reason why
in other words
leads to
cause
insofar as

Tiempo

before	meanwhile	as soon as
since	at the moment	just as
as	when	
until	whenever	

Más sobre conectores y marcadores de discurso, teoría y práctica → Fuentes externas

ACTIVIDAD 4

1. Prelectura

Lee el título para predecir o formular hipótesis sobre el contenido del texto y el género al que pertenece.

2. On the fly

Lee las oraciones de tópico para corroborar o corregir las hipótesis que formulaste en la etapa de prelectura.

3. Poslectura

Integra los nuevos conocimientos sobre el sistema de transitividad, marcadores de referencia, conectores lógicos, modalidad y vocabulario nuevo para comprender mejor el texto.

Now Featured—Movement Matters: How Embodied Cognition Informs Teaching and Learning

Jennifer M.B. Fugate & Sheila Macrine

Cognitive psychology has undergone a paradigm shift in the ways we understand how knowledge is acquired – away from brain-bound models towards an embodied view. Learning occurs through the body and is grounded in both perception and action. That is, cognition is deeply dependent upon the learner's physical experiences. Embodied learning shifts the focus from an exclusively mental effort toward an embodied, sensory-rich experience, offering new strategies to maximize learning effectiveness.

Yet the implications for how this shift in the science of learning impacts students' learning has yet to be fully realized. While we have made great advancements in the learning sciences over the past 30 years, there has been relatively little change in educational pedagogy. In most instances, education is still de-contextualized and full of disembodied learning methods, with the teacher as a 'talking head' transmitting the curriculum, and the students as passive recipients. Disembodied approaches include rote memorization, mindless drills, and skills, with a focus on standardized testing. Schools, whether conscious of it, still separate the mind from the body.

The purpose of our book, Movement Matters: How Embodied Cognition Informs Teaching and Learning (MIT Press, 2022) was to synthesize embodied cognition research, apply it to the classroom, and advance the communication among individual silos of embodied research. The goal of this book was to highlight the pertinent and emerging research on how to integrate embodied cognition across content areas. For example, James (chapter 4) illustrates that early handwriting practice leads to better letter recognition and literacy development. Gómez and Glenberg (chapter 5) show how vocabulary acquisition can be enhanced by shared communication, simulation, physical pantomime or gesture, and/or grounding of information to concrete objects. Boaler (chapter 8) shows how finger perception predicts learning math all the way through college. In chapter 10, Marquardt Donovan and Alibali describe the importance of affordances in "manipulatives" (physical objects that can be touched and moved with the hands during problem solving and learning). In chapter 13, Tancredi and colleagues show how students with learning differences learn differently through their bodily capabilities, and they invent adaptive embodied interventions that are available for differently-abled individuals. In chapter 16, Butera & Aziz-Zadeh show the importance of the mirror neuron system for imitative learning, and show that this system appears to play a fundamental role in both action understanding and imitation. Davis and colleagues (Chapter 17)

explores how the conceptual system is attuned to motor differences in individuals on the autism spectrum. In the last chapter (18), Fugate & Wilson-Mendenhall share embodied approaches to improving emotional well-being, namely how attention and disambiguation of affective states through mindfulness and increased emotional granularity.

Our book culminated in us (Macrine & Fugate, 2021) creating the Translational Learning Sciences Research for Embodied Cognition and Embodied Learning, adapted a model of translational science (Rubio et al., 2010). Our model leverages the empirical findings on embodied cognition to inform developmental, cognitive, educational psychology, and learning theory, and to provide an overarching theory for why embodied-based learning works. The call for translational research for the benefit of education is not new, although the term translational is only recently applied in fields other than the natural sciences. The overarching goal of our model is to accelerate the process of transforming laboratory discoveries into new pedagogical approaches to improve learning outcomes. Specifically, we outline seven goals: **(1)** making sense of and disseminating clinical and empirical research findings; **(2)** closing the gap between research and application; **(3)** combining cognitive psychology and pedagogy to share pertinent information; **(4)** improving teaching and learning through embodied applications; **(5)** confirming or debunking current trends; **(6)** elucidating conceptual frameworks for sensorimotor and body-based learning; and **(7)** recommending curriculum, designs, technology, and development to inform policy.

In the following series of blogs, some of our esteemed authors share with you their research on embodied learning for the classroom.

Macrine, S. L., & Fugate, J. M. (Eds.). (2022). *Movement matters: How embodied cognition informs teaching and learning*. MIT Press.

Fuentes externas

Más sobre **verbos modales**:

- https://www.perfect-english-grammar.com/modal-verbs.html
- https://agendaweb.org/verbs/modals-exercises.html

Más **ejercitación** sobre verbos modales:

- https://www.khanacademy.org/humanities/grammar/parts-of-speech-the-verb/verb-aspect-and-modal-verbs/e/modal-verbs

Mujer leyendo un libro sentada en un sofá de cuero.

https://unsplash.com/es/fotos/mujer-leyendo-un-libro-sentada-en-un-sofa-de-cuero-negro-de-3-asientos-hPKTYwJ4FUo

UNIDAD 2

Semiótica

ACTIVIDAD 1

1. Prelectura

Lee el encabezado de esta publicación ¿qué datos parece indicar acerca del texto que leerás después?

The International Conference on Communication and Media 2014
(i-COME'14), 18-20 October
2014, Langkawi, MALAYSIA
The Semiotic Perspectives of Peirce and Saussure: A Brief Comparative Study
Halina Sendera Mohd. Yakin, Andreas Totua
Universiti Malaysia Sabah, 88400 Kota Kinabalu, Sabah, Malaysia

2. On the fly

Mientras lees el resumen, enfocate en la idea central y escribila. ¿Podés confirmar alguna de las hipótesis que formulaste en el ejercicio de Prelectura?

Abstract

The primary purpose of this paper is to make a comparative analysis between two leading scholars' perspectives on semiotic theory, namely Charles Sanders Peirce and Ferdinand de Saussure. In addition, it is also aimed at discussing the linkage between communication and semiotics which can be grasped as a signification of symbol or simply as a study of sign in societal life. Apart from the communication field itself, the theory is commonly used as a reference in various fields such as philosophy, linguistic, arts and literature, archeology, architecture, mathematics and so on. The data has been attained by using content analysis technique of various studies on semiotics and related subjects. This article is expected to generate a positive contribution in underlining the significance of semiotic theory, not only towards the enhancement of semiotic epistemology but also to other researchers and academicians in related fields or specific areas.

Tema y Rema

Trabajaremos con las *nociones técnicas de Tema y Rema*. Estos son dos términos técnicos que se utilizan para descubrir el entramado de la organización de lo que les autores de los textos presentan como información "dada", vale decir, compartida y conocida, llamada Tema, a diferencia de la información nueva en la oración, denominada Rema.

En el apartado "Cómo se identifica el Tema" del libro llamado *Tema. Una*

perspectiva funcional de la organización del discurso (2009, p. 89)[7], la lingüista Ann Montemayor-Borsinger explica:

> ***El Tema de una oración (dentro de una perspectiva sistémico-funcional), es el elemento de origen experiencial[8] en posición inicial que sirve como punto de partida del mensaje*** *(Halliday, 1994; p. 38). Sistémicos como Matthiessen (1992, 1995) y Ravelli (1995) han refinado el análisis relacionado con la identificación del Tema, manteniendo como guía general que el primer elemento o grupo de elementos que tiene una función en la estructura experiencial de la cláusula es el Tema. Recordamos que la estructura relacionada con la metafunción experiencial es de tipo segmentada en un proceso (o verbo, en términos de la gramática tradicional) con sus participantes y circunstanciales asociados.*

Ahora bien, ¿para qué sirve reconocer o identificar Tema y Rema en la oración? Principalmente, ¿de qué modo impacta en nuestra lecto-comprensión? Montemayor-Borsinger (2009, p. 88) menciona las funciones más tradicionales de ambos. Para nuestros fines, pensemos en las funciones de *Tema y Rema en clave de* ***lectores*** *de textos de lengua extranjera:*

> *Cuando organizamos un mensaje tenemos entonces que decidir cómo empezarlo, y lo que viene primero, el Tema, expresa un tipo importante de significados textuales. Se acostumbra a usar esta primera posición para señalar cómo se elige desarrollar un texto y orientar al que lo lee o escucha.*

7. Fuente: Montemayor-Borsinger, A. (2011). Tema: una perspectiva funcional de la organización del discurso. Eudeba.
8. Recordemos que la noción de “experiencial” en la LSF refiere a la función de representar significados acerca del mundo, el entorno o la realidad.

Considerado a nivel semántico-discursivo, la sucesión de los Temas de un texto constituye su esqueleto, su andamiaje, o su 'Método de Desarrollo', como lo llamó Peter Fries, uno de los lingüistas sistémico-funcionales que más estudió el Tema (Fries, 1983, 1995a, 1995b).

Normalmente se pone en posición temática la información ya conocida de la cual se puede partir para recibir nueva información, aunque puede a veces ocurrir que el Tema exprese información nueva, por alguna razón funcional como la de sorprender al interlocutor. Pero generalmente se eligen ***Temas con información dada y Remas con información nueva.*** *Temas dados y Remas nuevos constituyen una manera más eficiente de guiar y ubicar a los destinatarios del mensaje, que pueden así seguir más fácilmente el desarrollo del texto. Muchos textos están organizados de manera tal que se ponen elementos del Rema de una cláusula en el Tema de la próxima, o se repiten significados del Tema de una cláusula en el Tema de las cláusulas siguientes.*

Cuando se planifica un texto, hay que decidir cómo empezarlo. Aquello que se coloca primero expresa un tipo importante de significado textual. Se acostumbra a usar esta primera posición para señalar cómo se elige desarrollar un texto y orientar al que lo lee o escucha.

El tema es un elemento o grupo de elementos experienciales de la oración en posición inicial, que sirve como punto de partida del mensaje. En los textos escritos es frecuente encontrar temas que son grupos nominales o preposicionales, p. ej. "In this article, I tackle the problem of language and thought. Taken from an ontogenetic perspective, such problem shows that...". En cambio, los temas en el registro oral tienden a ser verbos y deícticos enunciativos, p. ej., " I keep on studying but I just don't get it.". Estas diferencias se explican porque en un diálogo cara a cara los puntos de referencia son los mismos interlocutores, su situación espacial, temporal, etc. En cambio, en los registros escritos, el modo exige la **tematización de abstracciones:**

no partimos de nuestras sensaciones o experiencias individuales sino de generalizaciones razonadas sobre personas, situaciones, procesos, que toman la forma de grupos nominales y preposicionales, fundamentalmente. Obviamente entre los extremos hay una gradación de diversos tipos de texto.

En el *abstract* que leímos en la **Actividad 1**, el análisis de los *temas* y los *remas* es el siguiente:

Oración 1:

Tema: The primary purpose of this paper
Rema: It is to make a comparative analysis between two leading scholars' perspectives on semiotic theory, namely Charles Sanders Peirce and Ferdinand de Saussure.

Oración 2:

Tema: In addition
Rema: it is also aimed at discussing the linkage between communication and semiotic which can be grasped as a signification of symbol or simply as a study of sign in societal life.

Oración 3:

Tema: Apart from the communication field itself

Rema: the theory is commonly used as a reference in various fields such as philosophy, linguistic, arts and literature, archeology, architecture, mathematics and so on.

Oración 4:

Tema: The data
Rema: has been attained by using content analysis technique of various studies on semiotic and related subject.

Oración 5:

Tema: This article
Rema: is expected to generate positive contribution in underlining the significance of semiotic theory, not only towards the enhancement of the semiotic epistemology but also to other researchers and academicians in related fields or specific areas.

3. Poslectura

a) A lo largo de las cinco oraciones ¿se pusieron elementos del Rema de una cláusula en el Tema de la próxima? Si es así, indica cuáles y en qué oración.

b) ¿Se repitieron significados del Tema de una cláusula en el Tema de las cláusulas siguientes? Si es así, indica cuáles y en qué oración.

c) Teniendo en cuenta el análisis del Tema y el Rema, ¿cuál es la orientación que pretenderían ofrecer les autores del resumen?

d) ¿Te ayudó a comprender mejor el abstract analizar el Tema y el Rema de cada oración en un texto o en un extracto de un texto?

Persona que usa una laptop.

https://unsplash.com/es/fotos/persona-que-usa-macbook-pro-npxXWgQ33ZQ

ACTIVIDAD 2

1. Prelectura

El *abstract* de la Actividad 1 precede el texto de esta **Actividad 2.** ¿A qué género pertenece el texto a continuación, y cómo podés inferirlo?

_____

_____

_____

_____

2. On the fly

Lee los siguientes **encabezados** e intenta colocarlos donde correspondan en una primera lectura.

- **Comparative analysis**
- **Charles Sanders Peirce's theory of sign**
- **Discussion and concluding remarks: Communication and semiotic**
- **Ferdinand de Saussure's theory of sign**
- **Introduction**
- **References**

Semiotic derives from the Greek semesion, meaning sign, semainon which means signifier and semainomenon meaning signified or indication. Generally, semiotic is the study of signs or an epistemology about the existence or the actuality of sign in societal life. Many pioneers, researchers, practitioners and authors of semiotic such as Ferdinand de Saussure, Charles Sanders Peirce, Roland Barthes, Roman Jakobsen, Charles Morris and Umberto Eco (Eco, 1979; Leeds-Hurwitz, 1993; Panuti & Zoest, 1996; Chandler, 2002) have agreed on the simple definition. For understanding and clearer purpose, semiotic accounts for everything that can be seen or be interpreted as a sign as postulated by Umberto Eco in his book entitled 'A Theory of Semiotics' who indicated that 'semiotics is concerned with everything that can be taken as a sign. A sign is everything which can be taken as significantly substituting for something else' (1979, p. 7). According to Umberto Eco, that 'something else' does not necessarily exist exactly at the same time when the sign represents or replaces its position. Therefore, Umberto Eco often refers to it as theory of lie, or deception because it can be used for misleading or deceiving others (1976, p. 6-7).

Tracing the historical background and its advent, especially during the development of the classical semiotic, the philosophy pertaining to the significance of semiotic in the life of mankind began about more than two thousand years ago by the Greek philosophers. Later during the medieval times, the meaning and the use of signs was discussed in depth by the Stoici (Zeno) as well as other philosophers and scholars. However, the term 'semiotic' only appeared at the end of 18th century when introduced and applied by a German philosopher, Lambert. Later in the 20th century, the thought and the use of signs on a systematic basis began to gain public attention and till then the field of semiotic has continued to become a research topic and writings among scholars and

academicians to date (Panuti & Zoest, 1996; Yarni, Erizal, Studs, & Amris, 2001). In the development of the modern semiotic history, there are two pioneers from western countries who have made big contributions towards the respected field, namely Ferdinand de Saussure (1857-1913), a linguist from Switzerland and Charles Sanders Peirce (1839-1914), a philosopher from America.

Thus, the focal objective of this paper is to attain a brief comparative analysis of semiotic theory between both scholars from two different approaches and continents, the one from Europe and the other one from America, namely the semiotic approach introduced by Peirce and Saussure. The justification for choosing both approaches is mainly based on the fact that they have been recognized as pioneers of the respected epistemology in the history of modern semiotic. In addition, their approaches are not only confined within their respective area of studies but have reached and produced significant impact across other disciplines. In other words, they conform a multidisciplinary basis. To date, the semiotic approaches and concepts that they introduced have received widespread coverage and are often used as references in various fields and disciplines of thought that are not only narrowed to the field of philosophy and linguistic, but also arts & literature, such as music, theatre, movies and text analysis as well as communication, advertising, anthropology, psychology, archeology, architecture, mathematics and so on.

Ferdinand de Saussure is a linguist scholar who developed the basis or groundwork of general linguistic theory. He is well-known as a founder of modern linguistics. The emergence of the sign theory in the field of linguistics started when he felt that the theory of linguistic signs should be placed in a more general basis theory. Inspired and grounded from that thought, he proposed the term ‘semiology’ in a few compilations of lecture notes taken by his students between 1907 and 1911, which eventually were published as a book entitled

'Course in General Linguistics'. Finally, those works or masterpieces became a high-impact source of linguistic theory which is known as structuralism (Grenz, 2001). Below are the excerpts from Saussure which are considered as a catalyst for the emergence of semiotic field:

> *A science that studies the life of signs within society is conceivable; it would be a part of social psychology and consequently of general psychology; I shall call it semiology (from Greek semeion 'sign'). Semiology would show what constitutes signs, what laws govern them. Since the science does not yet exist, no one can say what it would be; but it has a right to existence, a place staked out in advance. Linguistics is only a part of the general science of semiology; the laws discovered by semiology will be applicable to linguistics, and the latter will circumscribe a well-defined area within the mass of anthropological facts* (Leeds-Hurwitz, 1993, p. 4).

The gist and primary focus of Saussure's theory is the principle that emphasized language as a system of signs, and besides language there are many other sign systems that exist in the world of mankind. However, in his opinion the system of linguistic signs or language is the most superior sign system compared to other sign systems that exist in the real world because it plays an important role in constructing reality. He focuses on the underlying system of language (*langue*) as compared to the use of language (*parole* or speech). There are several views or basic concepts underlying Saussure's theory of sign, namely the two-dimensional system, the consensus or conventional system, the networking relationship between signs system and the arbitrary system. In a nutshell, Saussure's theory of sign gives more emphasis to internal structure devoted to cognitive thought process or activity of human minds in structuring the physical (material) or intangible (abstract) signs of their environments or surroundings, and among

them is the structure of linguistic signs in the language system that allows them to function as human beings and communicate with each other. Saussure's theory is considered as the proponent to the thought that "language does not reflect reality but rather constructs it" because we do not only use language or give meaning to anything that exists in the world of reality, but also to anything that does not exist in it" (Chandler, 2002, p. 28). Saussure's principle is also known as structuralisme and has given the basic core to the mind of prominent scholars in other fields, and one of the most important is the approach of *structuralisme* by Levi-Strauss.

Charles Sanders Peirce is well-known as a pioneer of pragmatism doctrine, providing foundations of the general theory of signs through his writings and texts which were compiled 25 years after his death in a single comprehensive piece of work entitled Oeuvres Completes (Zoest, 1991). Unlike Saussure who introduced the term 'semiology', Peirce proposed the term 'semiotic', which, according to the latter, is synonymous with the concept of logic that focuses on the knowledge of human thinking process as portrayed in his writing published in 1931/1958:

> *Logic, in its general sense, is, as I believe I have shown, only another name for semiotic, the quasi-necessary, or formal doctrine of signs. By describing the doctrine as "quasi-necessary", or formal, I mean that we observe the characters of such signs as we know, and from such an observation, by a process which I will not object to naming Abstraction, we are led to statements, eminently fallible, and therefore in one sense by no means necessary, as to what must be characters of all signs used by a "scientific" intelligence, that is to say, by an intelligence capable of learning by experience (Leeds-Hurwitz, 1993, p. 4).*

The main principles containing Peirce's theory are the human mind and sign boundaries, the three-dimensional system (triadic/trichotomy) and the relativity regarding the three typologies or taxonomies of signs (icon, index and symbol).

Ferdinand de Saussure (1857-1913) and Charles Sanders Peirce (1839-1914) lived during the same epoch but came from two different continents. Saussure was born in Geneva, Switzerland whereas Peirce was born in Massachussets, United States of America (USA). Although they did not mutually recognized and knew of each other's studies, interestingly both were inclined to develop a field of signification, i.e., to elucidate and to search the meaning behind signs and symbols (Leeds-Hurwitz 1993). The thoughts and approaches of these two leading and renowned scholars in semiotics have pioneered and inspired other followers and scholars, among them Louis Hjemslev (1899-1965), Charles Morris (1901-1979), Max Bense (1910 – 1990) Roman Jakobsen (1896-1982), Roland Barthes (1915-1980) and Umberto Eco (1932-).

Terminologically, Saussure proposed the word semiology whereas Peirce employed the word semiotic. Conceptually, the principal concept of Saussure's theory initiated from the thought of a dichotomy or duality basis in which a sign consists of two focal components, namely *signifier* -the sound pattern (marker -sound image) and *signified* -the concept (the outcome/the interpretation/ conception of the signifier). *Signifier* refers to something that is in a material form (physical), explicitly exist and can be distinguished by human senses. On the other hand, signified denotes to something literally and physically does not exist, which is in abstract basis (Eco, 1976; Zoest, 1996; Leeds-Hurwitz, 1993; Chandler, 2001; Masinambau, 2001). Meanwhile, the relationship between the signifier and signified is refered to as the signification system. Saussure asserted that both concepts have a very close relationship and have mutual need and complement each other. It means that they cannot be separated from

each other, i.e one aspect will not exist wihout the existence of the other (Chandler, 2001). Besides signifier and signified, Saussure's concept of dichotomy also refers to form and content, langue and parole, synchronic and diachronic, as well as syntagmatic and paradigmatic/ associative. In contrast to the binary concept of Saussure's theory, Peirce's theory of sign focuses on three-dimensional or triadic and trichotomy system. Peirce classifies sign into three aspects, namely i) sign or representatum or ground, ii) object which is also referred to as referent, and iii) interpretant. The first aspect is synonymous with Saussure's concept termed as signifier which means physical signs (explicitly exist) (Leeds-Hurwitz, 1993) but does not have to be material in nature (Chandler, 2002). In comparison, what would be Saussure's concept of signified, is divided by Peirce into two components, namely object and interpretant. On the one hand, *object* refers to something that is represented or exemplified by the sign (Leeds-Hurwitz, 1993), which owns both properties of concrete and abstract in nature (Masinambow, 2001). On the other hand, *interpretant* means any meanings conveyed by the represantatum about the object which was previously unknown (Leeds-Hurwitz, 1993), and abstract in nature (implicitly exist) and does not exist in human perception (Masinambaw, 2001). The interactional relationship between those three concepts is denoted by Peirce as semiosis (Chandler, 2002).

Another difference is in terms of sign limitation. Saussure studied behavior and according to his views, a sign results from the imagination or an activity of human minds that is expressed through language codes and understood by the individuals who are involved in the communication process. In other words, a sign for Saussure is something delivered by someone with a purpose and specific meaning intentionally, i.e., a process or a phenomenon that does not occur coincidentally or by chance. This means that according to Saussure, nothing is a sign unless it is interpreted as a sign. Implicitly, Saussure meant that not all things neither in humans' lives nor their environments can be considered as

signs. It suggests that a sign has a certain limitation, subject to a system of conventions, which means something that is mutually or commonly agreed by all those involved in the particular culture. For example, the alphabet and writing system, the traffic signals and so on. Thus, in Saussure's theory of sign, language is a sign system because language has been conventionally used to allow humans to communicate among them. In spite of that, Saussure argued that even though a sign is subject to a mutual agreement or conventional system, it also possesses an arbitrary characteristic which means that a sign can produce a variety of different meanings depending on different interpretations. Saussure stated that "there is nothing at all to prevent the association of whatsoever with any sequences of sounds whatsoever....the process which selects one particular sound-sequence to correspond to one particular idea is arbitrary" (Chandler, 2002, p. 26).

In contrast with Saussure's viewpoints, Peirce studied logic and as a philosopher who embraced logical thinking, he wanted to know about the way human beings think, that is, how people use their common senses or rationality (Leeds-Hurwitz, 1993). In the words of Peirce, people think through the signs, which enable them to communicate with each other and give meaning to anything that exists in their environment (Zoest, 1991). The basic principle of Peirce's theory is that everything can be a sign, as long as it has the ability to represent something according to the individual's interpretation and thought. In contrast to Saussure's view, Peirce did not confine the existence of sign as something that is purposely conveyed. By this understanding, a sign can exist coincidentally

> *when someone has interpreted something as sign, even though it was not purposely meant or communicated to him. Peirce's ideas on sign encompass everything, whether it be created by human or not, as long as it can be grasped and acknowledged by their minds (Eco, 1991).*

Succinctly, the difference between Peirce's and Saussure's orientations lie on the aspect of reality as well as the discipline of epistemology. For Peirce, reality lies outside the internal structure of a human and does not relate to it, while for Saussure, reality has a bond with our physical or human minds. As for discipline, Peirce is in the field of philosophy, which queries the association between reality as a totality with the nature and the existence of the sign, while Saussure is in the field of linguistics, which focusses on the sign as an aspect of word construction (Masinambow & Rahayu 2001).

This paper has attempted to compare the theories of signs between Saussure's perspective of semiology and Peirce's notion of semiotic, the two prominent scholars of the related epistemology, while highlighting the relationship between the field of communication and semiotic. In communication, semiotic theory focuses on the ways symbol systems are structured and how those systems are operationalized. The association between semiotic and communication is clearly shown

> *through the assertions or claims of several scholars, among them Wendy Leeds-Hurwitz (1993) who described communication as a human symbolic activity, while semiotic is defined as the study of sign system. In fact, Leeds-Hurwitz has stated that to understand the theory of semiotic, which covers concepts such as signs, codes and culture, she pointed out that there is a 'special fit' between semiotic and non-verbal communication (1993, p. xvii), in the sense that both semiotic and communication constitute a continuum, and can be implied as a support apparatus towards a big umbrella, i.e., social culture. Furthermore, the three terminologies; semiotic, communication and culture were integrated by Umberto Eco when he claimed that "to communicate is to use the entire world as a semiotic apparatus. I believe that culture is that, and nothing else" (Leeds-Hurwitz, 1993, p. 17).*

In addition, Umberto Eco (1979, p. 8) also claimed in one of his hypotheses that drive his research that "semiotic studies all cultural products as a product of communication. Therefore each of these products would seem to be permitted by an underlying system of significations". Later on, he made an adjustment to his formulae by stating that "the whole of culture should be studied as a communicative phenomenon based on signification systems" (1979, p. 22). In this sense, Umberto Eco seems to equalize communication with the primary concept in semiotic, i.e., signification. In fact, the two concepts are often matched together by Umberto Eco as he often wrote the signification and/or communication. In a cultural process particularly, Umberto Eco claimed that methodologically, semiotic signification and communication are strictly intertwined, i.e having a close relationship or strong bond (Eco, 1979, p. 9). In addition, both semiotic and communication share many similar concepts such as symbol, meaning, verbal and non-verbal code etc. In a nutshell, the semiotic approach can be appropriately applied with an assumption that any cultural manifestations can be seen as a process of communication, i.e any cultural phenomenon is also a sign phenomenon.

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Keywords: Semiotic; Peirce; Saussure; comparative analysis

3. Poslectura

Polifonía textual

Todos los textos tienden a ser heterogéneos en muchos sentidos. Es muy habitual que un texto aluda a ideas puntuales, como también a configuraciones complejas e inespecíficas, que podrían manifestarse tanto en expresiones fijas (p. ej., frases comunes) en la superficie del texto, como en patrones constitutivos (p. ej., el discurso académico mezclado con el discurso publicitario) que articulan o hibridizan paradigmas no siempre obvios ni tampoco explícitamente afirmados en los mismos textos. Se trata de una amplia variedad de fenómenos constituyentes de los textos que generalmente se estudia como heteroglosia[9], interdiscursividad[10] o intertextualidad.

9. Heteroglossia is a translation of the Russian term *raznorechie*, which was coined by Russian literary analyst and language philosopher Mikhail Bakhtin. The term refers to (1) the simultaneous use of different kinds of forms or signs; and (2) the tensions and conflicts among those signs, based on the sociohistorical associations they carry with them (Ivanov 2001: 259). The first part of this definition subsumes multilingualism, but includes a broader range of linguistic phenomena. Although multilingualism typically refers to situations and practices that involve "distinct languages," the different kinds of forms or signs of heteroglossia include intra-language social variation, e.g. regional dialects and registers related to profession or age. Bakhtin coined the Russian term raznorechie specifically to refer to such intra-language variety within Russian, varieties with competing social and political implications, and the term is sometimes translated as "the social diversity of speech types" rather than "heteroglossia." From: Bailey, B. (2012). Heteroglossia. En *The Routledge handbook of multilingualism* (pp. 511-519). Routledge.

10. Ver: Bhatia, V. K. (2010). Interdiscursivity in professional communication. *Discourse & communication,* 4(1), 32-50. Resumen: In recent versions of professional genre analysis, context has assumed increasingly critical importance, thus redefining genre as a configuration of text-internal and text-external factors. The emphasis on text-external properties of genre has brought into focus the notion of interdiscursivity as distinct from intertextuality, which is primarily viewed as appropriation of text-internal resources. Drawing evidence from a number of professional contexts, this article explores the nature, function, and use of interdiscursivity in genre theory, defining interdiscursivity as a function of appropriation of generic resources across discursive, professional and cultural

Ahora bien, los artículos técnicos-científicos típicamente contienen una cantidad y variedad de voces que se incluyen para dar cuenta del origen de las ideas que aparecen en ellos. Es esperable y, de hecho, una práctica éticamente responsable, que estas voces sean citadas de modo directo o indirecto en los llamados *papers*, así como en todas las publicaciones técnico-científicas.

1. a) ¿Cuáles son los rasgos de las citaciones directas y de las citaciones indirectas?

Citas directas:

Citas indirectas:

1. b) ¿Cuáles son los únicos usos posibles del encomillado?

practices, which, it is claimed, is central to our understanding of the complexities of genres that are typically employed in professional, disciplinary, and institutional communication. Ver también por ej.: Candlin, C. N., & Plum, G. A. (2014). Engaging with the challenges of interdiscursivity in academic writing: researchers, students and tutors. En *Writing: Texts, processes and practices* (pp. 193-217). Routledge.

2. En el texto anterior, exploremos las distintas maneras de incorporar diferentes voces. Va a ser útil recordar y reciclar los *procesos verbales* así como también los *conectores lógicos* que sirven para estos fines. En cada extracto, identifica y explica el modo en que se incorporaron voces, refiriéndote al modo directo o indirecto, si se trata de publicaciones (o no) externas, al contexto en que se incorporan las voces, si se trata de citas de citas, si son meras alusiones, como también cualquier otro rasgo importante que notes en el complejo "tejido" que van hilando les autores del texto que leíste:

(a) Therefore, Umberto Eco often refers to it as theory of lie, or deception because it can be used for misleading or deceiving others (1976, p. 6-7).

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_____

(b) Inspired and grounded from that thought, he proposed the term 'semiology' in a few compilations of lecture notes taken by his students between 1907 and 1911, which eventually were published as a book entitled 'Course in General Linguistics'.

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_____

(c) Later in the 20th century, the thought and the use of signs on a systematic basis began to gain public attention and till then the field of semiotic has continued to become a research topic and writings among scholars and academicians to date.

(d) Peirce's ideas on sign encompass everything, whether it be created by human or not, as long as it can be grasped and acknowledged by their minds (Eco, 1991)

(e) Furthermore, the three terminologies; semiotic, communication and culture were integrated by Umberto Eco when he claimed that "to communicate is to use the entire world as a semiotic apparatus. I believe that culture is that, and nothing else" (Leeds-Hurwitz, 1993, p. 17).

(f) In the words of Peirce, people think through the signs, which enable them to communicate with each other and give meaning to anything that exists in their environment (Zoest, 1991).

(g) Peirce proposed the term 'semiotic', which, according to the latter, is synonymous with the concept of logic that focuses on the knowledge of human thinking process as portrayed in his writing published in 1931/1958:

> **(h)** *Logic, in its general sense, is, as I believe I have shown, only another name for semiotic, the quasi-necessary, or formal doctrine of signs. By describing the doctrine as "quasi-necessary", or formal, I mean that we observe the characters of such signs as we know, and from such an observation, by a process which I will not object to naming Abstraction, we are led to statements, eminently fallible, and therefore in one sense by no means necessary, as to what must be characters of all signs used by a "scientific" intelligence, that is to say, by an intelligence capable of learning by experience (Leeds-Hurwitz, 1993, p. 4).*

(i) Theo Van Leeuwen. (2005). *Introducing social semiotics.* Routledge.

(j) ¿Pensás que falta alguien o que faltaría mencionar o citar alguna publicación?

3. Una propuesta para pensar retóricamente sobre la polifonía de voces o el "tejido", el entramado de las citas en el texto. ¿*Para qué* se incluyen las distintas voces, en general (es decir, qué se pretende lograr)? ¿*Para qué* cada una, es decir, qué rol tiene cada una de las citas en su contexto particular?

Check the answer of the *On the fly activity (Actividad 2)* here:
https://www.sciencedirect.com/science/article/pii/S1877042814057139

ACTIVIDAD 3

1. Prelectura

¿Qué datos podés obtener del encabezado siguiente?

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Research article

Pantomime as the original human-specific communicative system
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2. On the fly

Lee el siguiente resumen teniendo en mente el artículo anterior sobre semiótica. Formula una primera hipótesis sobre cómo se concibe la semiótica a la luz de este nuevo texto:

Abstract

We propose reframing one of the key questions in the field of language evolution as *what was the original human-specific communicative system*? With the help of cognitive semiotics, first we clarify the difference between signals, which characterize animal communication, and signs, which do not replace but complement signals in human communication. We claim that the evolution of bodily mimesis allowed for the use of signs, and the social-cognitive skills needed to support them to emerge in hominin evolution. Neither signs nor signals operate single-handedly, but as part of *semiotic systems*. Communicative systems can be either *monosemiotic* or *polysemiotic*—the former consisting of a single semiotic system and the latter, of several. Our proposal is that pantomime, as the original human-specific communicative system, should be characterized as polysemiotic: dominated by gesture but also including vocalization, facial expression, and possibly the rudiments of depiction. Given that pantomimic gestures must have been maximally similar to bodily actions, we characterize them as typically **(1)** dominated by iconicity, **(2)** of the primary kind, **(3)**involving the whole body, **(4)** performed from a first-person perspective, **(5)** concerning peripersonal space, and **(6)** using the Enacting mode of representation.

Key words: evolution of communication; iconicity; gesture; polysemiotic; sign and signal; semiotic system

3. Poslectura

1. Tras varias lecturas, corrobora o corrige tu primera hipótesis. ¿Cómo se concibe la semiótica en este resumen?

2. ¿Qué voces predominan en este abstract?

3. ¿Cuáles elementos son Temas y cuáles son Remas? Analiza cada oración aquí:

4. Teniendo en cuenta de los elementos en posición temática, compara el abstract de la **Actividad 1** y los de esta **Actividad 3**. ¿Qué tendencias o generalidades diferentes encontrás?

Tipos de Sujetos

En las oraciones, encontraremos distintos tipos de sujetos:

- ***Sujeto Lógico*** es quien realiza la acción o proceso. Se analiza como actor (agente, paciente, etc.) según como esté representado el mundo (función experiencial).

- ***Sujeto Gramatical*** es el elemento nominal (frase sustantiva, pronombre o nombre) que concuerda con el verbo en persona (1º, 2º o 3º) y número (singular o plural).

- ***Sujeto Psicológico o Tema:*** Lo hemos estudiado como el Tema o punto de partida de la cláusula, cuando el ordenamiento de significados tiene un impacto en la estructura de la oración y cómo interpretamos un texto. El Sujeto Psicológico es lo diferente del Rema.

Estas tres funciones pueden combinarse o separarse en distintos elementos lingüísticos.

Ej. 1: "The dean presented a report before the assembly in the morning."
En esta oración, "The dean" es a la vez el actor, el sujeto gramatical y el tema.

Ej. 2: "In the morning, the dean's report was analized by the assembly."
Aquí las funciones están separadas:

- In the morning: tema.
- The dean's report: sujeto gramatical.
- The assembly: sujeto lógico, actor.

Veamos algunas variaciones de la misma idea, estructurada de diferentes modos:

Ej. 3. a) "Skinner's arguments were demolished by Chomsky in the review".
- Tema: Skinner's arguments.
- Sujeto gramatical: Skinner's arguments.
- Sujeto lógico: Chomsky.

Ej. 3. b) "In the review, Skinner's arguments were demolished by Chomsky".
- Tema: In the review (circunstancial).
- Sujeto gramatical: Skinner's arguments.
- Sujeto lógico: Chomsky.

Ej. 3. c) "Chomsky demolished Skinner's arguments".
- Tema: Chomsky.
- Sujeto gramatical: Chomsky.
- Sujeto lógico: Chomsky.

Recordemos que lo habitual es poner la información ya conocida (tema) en posición inicial, de la cual se puede partir para recibir nueva información (rema). Pero el tema también puede expresar información nueva. Un **orden no marcado** o **tema no marcado** se refiere al llamado "orden lógico" de las palabras, que sería la estructura de sujeto-predicado, cuando el sujeto gramatical es Tema. Si no se rompe ese orden, por defecto el sujeto gramatical está en posición inicial y constituye el tema.

(a) En lingüística sistémico-funcional, la función del sujeto gramatical es de representar un elemento sobre el cual la proposición hace un juicio o sobre el cual se afirma o niega algo. El conjunto de los sujetos gramaticales indica puntos sobre los cuales se predica algo en el texto.

(b) Los temas son los puntos a partir de los cuales procede quien escribe el texto para llegar a su audiencia.

Si los sujetos gramaticales son a la vez tema, el autor fusionó por razones funcionales el aspecto gramatical **(a)** con el desarrollo del texto **(b)**. Esto puede hacerse, por ejemplo, para expresarse inequívocamente. Los vimos en los ejemplos **(1)** y **(3. c)**.

Un tema marcado es aquel elemento de origen experiencial que no funciona como sujeto gramatical de la oración. Se trata de los objetos o circunstancias (o procesos expresados en forma de nominalizaciones y verboides (infinitivo, participio, gerundio), tales como en:

Ej. 4: *"Given that pantomimic gestures must have been maximally similar to bodily actions,* we characterize them as typically **(1)** dominated by iconicity, **(2)** of the primary kind, **(3)** involving the whole body, **(4)** performed from a first-person perspective, **(5)** concerning peripersonal space, and (6) using the Enacting mode of representation.".

Un orden inusual de las palabras cumple con una función comunicativa adicional, en este sentido se lo denomina "marcado". Este orden no tiene que ver puramente con los hechos en sí (participantes, objetos, circunstancias) sino con la manera en que le autor ordena los hechos del mundo, les adjudica relaciones temporales, causa-efecto, etc. Otro uso funcional del orden marcado es señalar a les lectores el cambio de orden de los significados, el cambio en el flujo del discurso. También es recurrente el uso del tema marcado en ciertos textos académicos, tales como los *abstracts* o resúmenes, dado que el orden marcado permite compactar la información.

En síntesis, algunas de los funciones para los temas pueden ser:

- Potenciar cambios en el orden de las palabras para que un texto sea percibido de manera distinta por les lectores, al volverlo más

emotivo, focalizado, llamando la atención sobre el elemento que se ubica como tema.
- Organizar el flujo del discurso en torno a una isotopía del espacio, tiempo, determinados participantes, etc.
- Señalar el cambio del flujo del discurso, para asegurar una mejor comprensión del texto.
- Compactar información en posición inicial, sin que sea necesariamente sujeto gramatical.
- Contribuir a una distribución coherente de la información.

En el marco de la oración, el tema termina con el primer participante, proceso o circunstancia. Pero la lingüística funcional considera a las metafunciones y a los conceptos como tema no sólo a nivel de la oración sino también del texto. Un **tema múltiple** ocurre precisamente cuando, antes del tema de origen experiencial, hay elementos cuya función textual es la de conectar partes del discursos, como las conjunciones interoracionales (p. ej., but, also, yet) o elementos con función interpersonal como modalizadores de enunciado (p. ej., surprisingly, fortunately, indeed).

Si estos elementos preceden al tema de origen experiencial son también parte del tema y conforman un **tema múltiple.** El **tema múltiple** incluye el primer elemento experiencial más elementos de origen textual o interpersonal que estén antes.

Ej.5: *"It was a tough decision.* ***Unfortunately, however, it*** *didn't play out well this time."*

- Unfortunately: modalizador de enunciado.
- However: conector lógico interoracional.
- it: elemento experiencial (referente: a tough decision).

Some takeaways:

- El tema está siempre en posición inicial y es el punto de partida del mensaje.
- El tema no marcado coincide con el sujeto gramatical y lógico.
- El tema marcado será un objeto o circunstancial.
- El tema múltiple es el que incluye un elemento experiencial precedido por un elemento textual y/o un elemento interpersonal.

Adaptado de "Metafunción Textual", de Carboni[11]*,(2017)*

5. Examina las siguientes oraciones y distingue los Temas, los Sujetos y si se trata de oraciones organizadas de modo no marcado o marcado:

a) *We propose reframing one of the key questions in the field of language evolution as what was the original human-specific communicative system?*

b) *Given that pantomimic gestures must have been maximally similar to bodily actions, we characterize them as typically (1) dominated by iconicity, (2) of the primary kind, (3) involving the whole body, (4) performed from a first-person perspective, (5) concerning peripersonal space, and (6) using the Enacting mode of representation.*

11. Fuente: Carboni, M. A. (2017). *Breve panorama histórico de los estudios lingüísticos*. Universidad Nacional de Lomas de Zamora - Facultad de Ciencias Sociales y Humanidades, Publicación Interna de la Cátedra de Lingüística.

c) *Our proposal is that pantomime, as the original human-specific communicative system, should be characterized as polysemiotic.*

6. ¿Quién o quiénes son los genuinos agentes o actores de estas oraciones *en el mundo real*?

7. A continuación, el cuerpo del artículo de Zlatev, Zywiczyski & Wacewicz (2020) , disponible en https://academic.oup.com/jole/article/5/2/156/5899988. ¿Qué utilidad o aplicaciones podría tener este tipo de semiótica en el campo de la Psicopedagogía?

1. Introduction: reformulating the question

Debates in the field of language evolution often focus on the nature of human *protolanguage*, understanding this notion along the well-known conception proposed by Bickerton (1990: 128) as 'a more primitive variety of language' that serves as a stepping stone in language evolution. In particular, theorists differ on whether such protolanguage was 'musical', 'gestural', 'lexical', or otherwise (Fitch 2010; Żywiczyński, Gontier and Wacewicz 2017). This starting point, however, assumes that the first step toward human communicative specificity was in fact a *language*. Even if 'primitive', we are still left with the question of how it could evolve in the first place. This is a non-trivial question since, as argued by Donald (1998: 140): 'there are important fundamentals missing from the primate mind, without which protolanguages could not emerge; I shall call these the 'cognitive prerequisites' of protolanguage'. The challenge is to spell out these prerequisites.

Research in the evolution of language has for a long time attempted to establish prerequisites for language that are absent in non-human animals in general, and in the extant non-human apes in particular (e.g. Johansson 2005; Fitch 2010). Early research primarily focused on the anatomical differences between the vocal tract of modern humans and non-human apes or other hominin species (Lieberman and Crelin 1971). While this line of research has generalized to a quest for *sensorimotor* differences (Boë et al. 1999, 2002; Corballis 2002; d'Errico et al. 2003), there is a degree of consensus that such differences are not fundamental and thus unable to explain the qualitative differences between animal and human communication (Fitch 2010). The focus has thus shifted to a quest for cognitive prerequisites, with proposals such as human-specific forms of 'theory of mind' (e.g. Bräuer et al. 2007), meta-representation (e.g. Suddendorf and Whiten

2001; Dunbar 2007; Horton and Brennan 2016), and memory (Coolidge and Wynn 2005; Hurford 2011; Tallerman 2011; Corballis 2013). Others have focused on the *social* (or rather, socio-cognitive) aspects such as pro-sociality (Tomasello 2008), complex action imitation (Arbib 2012), and trust (Knight 1998; Wacewicz and Żywiczyński 2018).

As a complement to these approaches, we here focus on *semiotic* (i.e. meaning-making, and in particular communicative) prerequisites for the evolution of language (Donald 1991; Deacon 1997; Hurford 2011). Further, by adopting concepts from the new discipline of *cognitive semiotics*, which integrates theories and methods from the traditional fields of semiotics, linguistics, and cognitive science (Zlatev 2009, 2015, 2018; Sonesson 2010; Konderak 2018), our aim is to integrate evolutionary considerations regarding semiotic, cognitive, and socio-environmental factors into a unified approach. This should be applicable not only to the evolution of language, but to the evolution of *polysemiotic communication* (Green 2014; Zlatev 2019): the combination of a number of different semiotic systems within an integrated communicative system, as we explain in the following sections.

To summarize our proposal, we begin by proposing that the first semiotic threshold that our ancestors needed to pass was to evolve the ability to use *signs*, as opposed to signals (Sonesson 2010; Zlatev 2009, 2015, 2018). Both signs and signals form *semiotic systems*, which can be sign systems or signal systems. Language constitutes a paradigmatic *sign system*, and, arguably, so do gesture and depiction (Zlatev 2019). The well-known vervet monkey alarm calls (Seyfarth and Cheney 1990), on the other hand, constitute a signal system. When two or more semiotic systems (of either kind) are combined in an integrated communicative system, the latter is *polysemiotic*; else it is *monosemiotic*.

The question substituting the one about the original 'protolanguage' can thus be reformulated as: *What was the original human-specific communicative system?* As reflected in the title, the answer we propose is that it was *pantomime*, understood as a communicative system, with *gesture* as the sign system at its core, but also containing vocalizations, and at least some aspects of depiction. The latter systems would with time evolve into full-fledged speech (a sub-system of language) and drawing (a sub-system of depiction), respectively. We thus propose that pantomime was from its onset *polysemiotic*, combining different semiotic systems, as well as *multimodal*, involving different sensory channels. Importantly, these two notions are not synonymous (Stampoulidis, Bolognesi and Zlatev 2019).

In Sections 4 and 5, we provide empirical support for this theoretical proposal. First, we outline a scenario for the evolution of pantomime on the basis of mimesis theory (Donald 1998, 2012, 2013; Zlatev 2008b, 2014a), and then ask: *what kind of gestures would have characterized the core of pantomime?* Since, following mimesis theory, they should have been of the kind that are representational, but most similar to practical actions, we use distinctions made in semiotics and gesture studies to describe such 'pantomimic gesture'. We conclude in Section 6 by summing up the implications of our proposal for pantomime as the original human-specific communicative system.

2. From signals to signs

A crucial, though theoretically underdeveloped distinction is that between two different kinds of semiotic units: *signals* and *signs*. Although there have been attempts to blur this distinction (Hauser and Konishi 2003; Dennett 2017), it is affirmed by a majority of researchers in language evolution and animal communication (Deacon 1997; Hurford 2007; Tomasello 2008; Zlatev 2003). It is also pivotal for Vygotsky's (1978) developmental semiotics.

The assumption that there is a fundamental difference between the meaning-making involved in language versus various natural forms of communication is reflected in the well-known methodological statement of Burling (2005: 16; cf. Hurford 2007): 'We will understand more about the origins of language by considering the ways in which language differs from the cries and gestures of human and non-human primates than by looking for ways in which they are alike'. The point is that from a semiotic perspective, most of the 'cries and gestures' of animals, as well as those of human beings (like laughter or yawning), are qualitatively different from signs such as (1) a word like dog, (2) an iconic (i.e. resemblance-based) gesture that resembles a dog, or (3) a picture of a dog. The latter are examples of *signs*, while the former are *signals*. By adapting and extending the definition of what distinguishes language from signal systems made by Zlatev, Persson and Gärdenfors (2005), we can characterize the differences between *signals* and signs in terms of the criteria given in **Table 1**.

Table 1. Six key features distinguishing signals and signs.

Feature	Signals	Signs
(#1) Learning	Mostly innate	Mostly learned socially
(#2) Conscious control	Low	High
(#3) Production	Tied to a particular context	Flexible, relatively independent of specific context
(#4) Interpretation	Relatively fixed response	Flexible and 'negotiable'
(#5) Communicative relations	Mostly dyadic: Communicator–Recipient Object–Communicator	Mostly triadic: Communicator–Object–Addressee
(#6) Untruthful use	Hard	Easy

In terms of (#1), animal signals like alarm calls or bird song (Marler 1991) clearly involve a degree of learning, and are not completely innate (i.e. genetically determined). However, such learning is limited in terms of both mechanisms and in scope, making signals typically common for the species as a whole (Hauser 1996). Signs (like words and most human gestures), on the other hand, are learned socially, with imitation playing a key role (Piaget 1962; Richerson and Boyd 2005). This is key for them to form sign systems that are *open* (see Section 3), leading to almost limitless variation across cultural groups.

With respect to (#2), typical signals like chimpanzee food cries are produced with limited volitional control (Deacon 1997). Of course,

there are well-known *audience effects*, showing for example that 'a visible audience increase[s] the rate of food calling for a large, sharable quantity of food, yet decrease[s] the rate of a small, non-sharable quantity' (Brosnan and de Waal 2002: 211, cited in Hurford 2007: 233). Thus chimpanzee calls, and even more so chimpanzee gestures (Tomasello 2008), cannot be regarded as fully out of conscious control. Likewise, it could be doubted how voluntary the production of some human signs, like showing another driver the middle finger, actually is. Still, the two types clearly differ in the degree of voluntary control involved in their production, a typical kind of signal use leaning towards the automatic side of the continuum, and sign use—towards the pre-meditated side.

Vygotsky's ideas concerning the difference between signs and signals in the context of child development are very much in line with this claim (Vygotsky 1978). On his account, it is through signs that children can break away from stimulus-response behaviour, understood as an automatic reaction of an organism to a change in the environment. The sign provides a mediating link between Stimulus and Response, and thus allows greater control of one's behaviour. That non-human animals are to some degree able to acquire this was shown in a study based on a reversed-reward contingency task (Boysen et al. 1996), where chimpanzees were taught to point at lesser and larger amounts of food, receiving what they did not point to. It was found that they could not stop pointing at the larger amount, despite the fact that this gave them the smaller reward. However, when they were given 'tokens' standing for the two different kinds of portions, they could learn the task, pointing to the token (sign) for the lesser quantity, so as to receive the larger one. The sign had mediated between S and R, in Vygotsky's terms, making the chimpanzees less controlled by their direct perceptions and wants.

What **(#3)** emphasizes is that despite 'audience effects', and some other limited forms of context sensitivity, signals are provoked by the current situation: be this external conditions such the presence of food or danger, or internal conditions like hunger. This makes them tightly linked to the here or now; in semiotic terms, they are indexical to one or more elements of the present situation. Note, however, that this does not make them *indexical* signs, which requires clear differentiation from the referent (e.g. Sonesson 2007; see below). Signs are largely independent of the physical context in which they are produced, and denote *objects* (in a general sense of the term, including properties or events) that may or may not be currently present, thereby displaying *displacement* (Hockett 1960).

From the perspective of the recipient **(#4)**, signals are likewise inflexible, leading to more or less fixed patterns of response; for example alarm calls tend to be promptly followed by the appropriate flight responses. A sign can, on other hand, always be interpreted in more or less various ways: '*Beware of the DOG*. Hmm, really? Do they really have a dog, and if so, is it really as dangerous as the sign says?' This brings us to **(#5)**: communicative signs are always *triadic*, in the sense that they involve a communicator, a denoted object, and an audience (that could be the communicator himself, once the sign has been internalized, and used for thought). A sign could be a pointing gesture, where the communicator intends to bring the attention of the addressee to a relevant object, and for the addressee to recognize this, rather than just to look in a given direction (Tomasello 2008; Zlatev, Brinck and Andrén 2008). In contrast, signals are *dyadic*, even when they involve two dyads: **(1)** communicator and audience, and **(2)** object and communicator. If only **(1)** is the case, signals are clearly dyadic, as in mating calls. If both **(1)** and **(2)** are the case, we have so-called 'functionally referential' signals like the alarm calls mentioned above. This, however, is qualitatively different from the true referential triangle of intentional *denotation* involved in sign use. This difference

is consistent with properties **(#2–4)**: a signal is typically produced involuntarily, as a response to something in the environment, leading to an equally direct recipient reaction; a sign is produced voluntarily, denoting something that is either present or absent in the situation, and the effect on the audience cannot in general be predicted.

Finally, we come to criterion **(#6)**, which follows from what was said so far, but deserves to be spelled out on its own. Signal-based communication tends to be 'honest', i.e. non-manipulative, to the degree that the interests of the producers and receivers are aligned—one example being closely related individuals, between which cooperative communication can evolve through 'inclusive fitness' (Hamilton 1964). Any conflict of interests creates motivation for 'deception', so that to remain 'honest', signals must usually be stabilized by the cost of a signal, as in the case of handicaps such as the famous peacock's tail (Zahavi 1975; Smith and Harper 2003). Signs, on the other hand, can easily be used untruthfully with anyone. Indeed they often are, in all human cultures, and yet this does not lead to a breakdown in communication (Dor 2017). This is so because sign-based communication more often than not follows Gricean principles (Grice 1957, 1968, 1975; cf. Scott-Phillips 2008; Wacewicz and Żywiczyński 2018), so that as a default, the communicator is expected to provide honest communication, and actually delivers on that expectation. This, on the face of it, is a puzzle, as honesty is neither guaranteed by the cost of the sign nor by the alignment of interests between the communicator and recipient. A candidate solution of this apparent paradox is given by the recent 'social turn' in evolutionary linguistics, which states that an advanced form of intersubjectivity and a high degree of trust were preconditions, not only for language, but also for the evolution of sign use in general (Dor, Knight and Lewis 2014; Zlatev et al. 2008).

Therefore, we may agree with Eco (1976), who stated that a sign is 'everything that can be used in order to lie' (p. 7). However, Eco had a rather broad notion of the sign, including the manipulative signals of animals, mentioned earlier. Consider the red deer dynamically lowering its larynx to increase the functional length of its vocal tract so as to produce a more impressive roar, leading the audience to overestimate its body size (Fitch and Reby 2001). Does this classify as lying? We think not, as lying presupposes the ability to strategically and flexibly choose between being truthful or not, which does not apply to the roaring deer. In terms of the well-known typology of deception (Mitchell 1986), only human beings, and possibly some non-human great apes, are capable of the highest form of *intentional deception*. Chimpanzees are capable of this, but characteristically not through their (vocal) signals, but through bodily actions (De Waal 2007). Thus, we could revise Eco's statement: *You can lie with signs, but not with signals*.

In sum, the discussion in this section, based on the six criteria of Table 1, shows that signs and signals differ qualitatively rather than quantitatively. While we allow for the gradation between signals and signs on the individual properties in Table 1, taken together they constitute a *qualitative difference*. While it is not impossible for non-human animals to learn signs under special conditions, their communication in the wild overwhelmingly takes place through signals. This makes good evolutionary sense, as sign use implies a great degree of *freedom*: in learning **(#1)**, control on whether to communicate or not **(#2)**, choice in topic **(#3** and **#5)**, interpretation **(#4)**, and to be truthful or not **(#6).** To manage this requires cognitive and social prerequisites that are absent in non-human animals. To rephrase the conclusion from Zlatev et al. (2005: 3), where the focus was on language and not on sign use in general, 'no animal in the wild has anything approaching [a] socially transmitted, voluntarily controlled, contextually flexible, triadic semiotic system', which is a wider notion than language.

The discussion so far has defined signs in contrast to signals in terms of a set of particular properties, resembling Hockett's (1960) 'design features'. But is there not a deeper theoretical basis for these differences? Following proposals from phenomenology (Sokolowski 2000) and cognitive semiotics (Zlatev 2009, 2018), we may define sign use as follows:

> ***DEF.*** A sign <E, O> is used (produced or understood) by a subject S, if and only if:
>
> **(a)** S is made aware of an intentional object O by means of expression E, which can be perceived by the senses.
>
> **(b)** S is (or at least can be) aware of **(a)**.

First, this definition implies that sign use requires a conscious subject, in both production and comprehension. It does *not* imply that signs are only used in intrapersonal communication as a doctor observing a given symptom E (like coughing), could conclude that it is a sign of a given intentional object O (like Covid-19). However, the definition implies that E is not just associated with O, as a stimulus is to a response, but signifies it. Condition (b) guarantees the latter. Signals, like vervet monkeys' alarm calls, may fulfill condition (a), but not (b). Definitions of sign use based on 'double asymmetry' between E and O, with E being more directly perceivable, and O more in focus (Sonesson 2007, 2010) are compatible with our definition, but we submit that ours is more general. It is hard to see why there would be no asymmetry and differentiation between, for example, alarm calls and the corresponding predators. On our account, it is the reflective awareness of the directed relation between E and O in (b) that distinguishes signals from signs.

The link between E and O constitutes the *semiotic ground* of the sign (Ahlner and Zlatev 2010). Following an influential interpretation of Peircean semiotics (Sonesson 2010), this ground can be of three different kinds: *iconic* (based on the expression-object resemblance, E–O), *indexical* (contiguity in space/time between E and O) and *symbolic* (based on convention, that is: common knowledge that E denotes O). The three coexist in a single act of sign use, but typically one predominates (Jakobson 1965). For example, a pointing gesture typically involves deixis (a special kind of indexicality) with respect to its object, resemblance (i.e. iconicity) with the intended gaze alternation or motion of the addressee, and conventionality (i.e. symbolicity), since there are different norms for pointing in different cultures. Yet, it is generally considered an indexical sign, as the first kind of ground is arguably most essential for establishing the E–O relation.

But what allowed the evolution of a communicative system based on signs? Once again, we are back to the question of prerequisites. Section 4 will spell out several of the social-cognitive adaptations necessary for learning signs, including enhanced (i) learning of bodily skills, (ii) intersubjectivity and trust, and (iii) imagination, all of which were provided by *bodily mimesis*. Jointly, they paved the way for the evolution of signs, and further, of *sign systems*, a notion that we explain in the following section.

3. Semiotic and communicative systems

While sign use constitutes an important semiotic threshold, individual signs are of little use on their own. Rather, the power of sign use comes from combining signs to form more or less complex messages such as stories. Further, depending on their properties and interrelations, signs form systems. The best-known and arguably most fundamental ones are the sign systems of *language* (with speech and writing as

sub-systems), *gesture* (where the expression of the sign is always produced by the body of the communicator)[1] and depiction (where the expression consists of marks made on a two-dimensional surface)[2]. **Table 2** shows some of the properties of these systems. Excluding for the time being signed languages, language is either spoken or written, and in the latter case it is characterized by a high degree of permanence of its expressions, at least in prototypical written media. In either case, it has so-called 'double articulation': phonemes or graphemes (or other elements that are meaningless in themselves) combine systematically to form meaningful 'morphemes'. Its semiotic ground is predominantly conventional, even if iconicity and indexicality are also present (Jakobson 1965). Its 'syntagmatic' (sequential) relations are characterized by a high degree of compositionality, where the meaning of a composite sign is built up from the meanings of its constituent signs, and the 'rules' for combining these.

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1. One could argue that the everyday use of the term "gesture" is much narrower, focusing on manual communicative movements that are perceived visually. In earlier work (Zlatev et al.) we have therefore contrasted gesture and pantomime, and distinguished between "gesture-first" and "pantomime-first" theories of language origins. Here, however, we refer to the broader notion of gesture as a type of semiotic system.

2. Other candidates that have been proposed are *ritual* (Knight 1998), dance (Mithen 2005; Savage 2015; Maraz et al. 2015), and *music* (Monelle 1991) to that extent that these are composed of signs. However, they differ from the definition of sign use provided in Section 2, by lacking clear intentional objects, and thus being non-referential. Music, for example, involves a complex network of relations between pitch, rhythm and dynamics (Nettl 2000). It appears to resemble language in some respects, given that all musical cultures employ a small set of 'notes', usually consisting of 5 or 7 frequency values and their integer multiples, to build a potentially infinite number of musical phrases (Fitch 2010; Arom 2000; Nettl 2000). However, these phrases do not denote, with the relatively rare exception of programmatic music (Giraldo 2019). There have even been attempts to link specific emotions to certain musical phrases: descending melodic contours with sadness, rising contours with happiness and so on (Nikolsky 2015) but this does not mean that descending and rising contours denote these emotions, unlike the linguistic signs "sad" and "happy".

Table 2. The sign systems of language, gesture and depiction, with some of their properties.

Properties	Sign systems			
	Language		Gesture	Depiction
	Speech	Writing		
Production	Vocal	Material	Body	Material
Perception	Auditory (+ Visual)	Visual	Visual (+Auditory + Tactile)	Visual (+ Tactile)
Permanence	Very low	High	Low	Intermediate
Double articulation	Yes		No	No
Semiotic grounds	Conventional > Iconic + Indexical		Iconic + Indexical > Conventional	Iconic + Indexical > Conventional
Syntagmatic relations	Compositional		Linear	Possibly linear

In the case of gesture and depiction, on the other hand, the predominant grounds are iconic and indexical, even if conventionality is also important (see Section 5). Gestures with a dominant iconic ground denote their objects on the basis of resemblance more than on shared conventions, and the same goes for depiction. It is usually possible to map specific elements of the expression to specific ones on the object. For example, a gesture of two fists bumping into one another to denote a car crash corresponds to the two cars, and

a picture of a forest will typically have individual trees. But these elements will combine in a holistic way as in perception, and not as in language, where the words/morphemes in 'car crash' and 'many trees' combine as heads and modifiers. Further, there is nothing corresponding to phonemes in gesture and depiction. Their signs can be analysed into phrases and units (Kendon 2004; Green 2014), but these are not made up of minimal distinctive elements.

Further, gesture and depiction also have much less systematic manners in arranging sequences of signs, making it more difficult, though not impossible (e.g. Sibierska 2017), to express complex messages such as narratives. In terms of permanence, both are intermediate to speech and writing. The permanence of gesture is similar to but not identical with that of speech, as one can 'hold' gestural expressions in mid-air, so to speak, when the need for emphasis or audience attention requires it. The permanence of depiction, on the other hand, is similar to that of writing.[3]

Given the many similarities between gesture and depiction as semiotic systems, what are the main differences between them? In terms of production, in depiction the producer's physical action results in a static expression, with shape and color as the most important features for establishing its meaning. In the case of gesture, the dynamic bodily action itself constitutes the expression, and this can either denote intentional objects, or contribute to the social interaction more generally in so-called *pragmatic gestures*. This makes gestures particularly suitable for face-to-face communication

3. It is the *medium* (e.g. sand vs. stone) in which depiction is made that will largely determine its degree of permanence, and the same could be said of writing. Thus, the difference in permanence is not so much between the semiotic systems of writing and depiction themselves, but between their prototypical medial expressions. We thank Linea Brink Andersen for helping make this clarification.

(Goffman 1963), where it is necessary that interactants may easily change the roles of producer and recipient. Turn-taking is traditionally understood in terms of how speech is distributed in conversation (e.g. Schegloff 1996, 1998), but research has shown the importance of gestures in the process (Kendon 1967; Duncan 1972; Ho et al. 2015; Torreira et al. 2015). This is not to say that depiction cannot be used interactively, as in some traditional forms of narration, where speaking, gesturing and drawing in the sand fluently combine (Green 2014). There is also a large body of experimental-semiotic research on the interactive use of drawings, which leads to the emergence of communicative conventions (Galantucci 2017). Yet, given that gesture is part and parcel of the living body and can be used in any context, while depiction requires specific material resources, gesture appears to show advantages over depiction for the purpose of managing communicative interactions.

Sign systems such as language, gesture and depiction are clearly *semiotic* systems (Zlatev 2019), but the terms semiotic has a broader application than signs, and concerns other kinds of meaning such as *affordances* (Gibson 1979; Sonesson 2007), and indeed signals, as defined in Section 2. Hence, we propose to use the term *semiotic system* as a superordinate concept, comprising both sign systems as those in Table 2, as well as *signal systems* such a bee dance and various species' alarm calls. The differences between signs and signals discussed in Section 2 naturally carry over to their corresponding systems. This implies that sign systems are *open,* with no limit on what they can express by either inventing new signs, or novel combinations of existing signs. Signal systems, on the other hand, are closed, with strict limits on what can be used to communicate with them. For example, putty-nosed monkeys are known to have two basic alarm calls: 'pyows' that act as a general warning call, and 'hacks' that indicate an approaching eagle (Arnold and Zuberbühler 2012). They have no dedicated call for, say, humans

or any other special kind of predator. Occasionally, they may combine calls into 'pyow-hack' sequences, but these are not compositional, as they form a functionally different type of signal, used for initiating the movement of a group (Schlenker et al. 2017).

Communication in *only* language, gesture, or depiction is thus *monosemiotic*. But if we consider actual human communication, especially in face-to-face contexts, interactants typically use both spoken language and gestures (McNeill 1992; Kendon 2004), and when the opportunity arises, also depiction. Such polysemiotic communication (Zlatev 2019)4 often takes place in highly integrated ways (Green 2014), and thus we can speak of polysemiotic communicative systems. Their composing semiotic systems can be either sign systems, signal systems, or the combination of sign and signal systems, for example, speaking while using spontaneous facial expressions. In the following section, we propose that pantomime can be characterized as such a polysemiotic *communicative system*, evolving from bodily mimesis.

4. Many authors refer to such communicative acts as 'multimodal', understanding language and gesture as 'communicative modalities' (Vigliocco et al. 2014). However, this terminology is problematic because it confuses sign systems, or 'modes' in social semiotics (Kress 2009), and perceptual modalities, and there is no one-to-one correspondence between these, as also indicated in **Table 1.**

4. Mimesis and pantomime

4.1 Mimesis theory

The essential 'cognitive prerequisites' for the evolution of any kind of sign system can be arguably summarized through a single notion: *mimesis* (Donald 1998, 2012, 2013). Stemming from the Greek *mīmeisthai* ('imitate'), within current evolutionary research the concept of (bodily) mimesis is used to encompass '...pantomime, imitation, gesturing, shared attention, ritualized behaviors, and many games. It is also the basis of skill rehearsal, in which a previous act is mimed, over and over, to improve it' (Donald 2001: 240). What is common to these various capacities is according to Donald (2012: 180) 'an embodied, analogue, and primordial mode of representation'.

According to Donald's general theory of human cognitive-semiotic evolution, it was the 'unified neuro-cognitive adaptation' (Donald 2012: 181) of mimesis, emerging ca. 2 MYA in a particular species of hominins that served as the watershed between human beings and other animals, prior to the evolution of language (Zlatev 2014b). While the original function of mimesis was likely tool production, it eventually extended to cover much else. First, as noted repeatedly by Donald, mimesis allowed the development of increasingly complex bodily skills, based on the ability to 'compare, in imagination, the performed act with the intended one' (Donald 2012: 182). This would have been essential in, for example, the learning of projectile throwing, jumps, dance, and many kinds of rituals. Second, and related to this, mimesis allowed human-specific forms of social learning, such as complex imitation (Arbib 2005), 'over-imitation' (Horner and Whiten, 2005), and more generally, pedagogy (Gergely and Csibra 2006). In other words, bodily mimesis was not only a purely motor-cognitive adaptation, but also as a *social*-cognitive one, co-evolving with aspects of intersubjectivity such as trust and empathy (Hutto 2008; Zlatev 2008a). Third, as a consequence of the previous two points, mimesis

propelled the evolution of *imagination* (a form of intentionality that is not directed to what is present but to what is absent, see Sokolowski 2000) to unprecedented levels (Zlatev 2014b, 2019).

However, none of these capacities necessarily involve sign use as defined in Section 2, since they do not imply clear awareness of the link between expressions and objects, and denotational relations between them. To help distinguish different 'kinds' or functions of mimesis, as well as to distinguish it more clearly from language, a more formal definition of *bodily mimesis* such as the following could be used:

> ... an act of cognition or communication is an act of bodily mimesis if: (1) it involves a *cross-modal mapping* between exteroception (e.g. vision) and proprioception (e.g. kinesthesia); (2) it is *under conscious control and is perceived by the subject to be similar to* some other action, object or event, (3) the subject intends the act to stand for some action, object or event for an addressee, and for the addressee to recognize this intention; (4) it is *not fully conventional and normative*, and (5) it does *not divide (semi)compositionally* into meaningful sub-acts that *systematically relate* to other similar acts, as in grammar (Zlatev 2014b: 206).

Starting from the end, the last two points are meant to distinguish acts of mimesis from any kind of language. The various kinds of capacities discussed above, such as skill rehearsal, imitation and teaching, involve points (1) and (2), and their combination may be referred to as *dyadic mimesis*. While this *may* involve sign use, as in private pretend play, it does not have to, as in acts of *demonstration*, as discussed below. Adding (3) brings an explicitly communicative, 'Gricean', element, leading to *triadic mimesis* (Zlatev 2008b; Zlatev et al. 2013) and thus a case of sign use.

But what type of communicative system would evolve from this? Given the focus on the physical body, the core of the system should be constituted by the sign system of *gesture*. Further, given that such gestures should 'be similar to some other action, object or event' (see the citation above), we can expect these gestures to be of the kind that *maximally resemble* their intentional objects. In Section 5, we explore properties of such 'pantomimic gesture' based on a number of distinctions that have been made in the literature. But triadic mimetic acts could also leave traces on a surface, and thus include a preliminary form of depiction (Zlatev 2019). And it may involve vocalizations, as either signals or signs. It is this polysemiotic communicative system emerging from bodily mimesis that corresponds to the notion of *pantomime*, previously defined as:

> a non-verbal, mimetic and non-conventionalised means of communication, which is executed primarily in the visual channel by coordinated movements of the whole body, but which may incorporate other semiotic resources, most importantly non-linguistic vocalisations. [This may] holistically refer to a potentially unlimited repertoire of events, or sequences of events, displaced from the here and now (Żywiczyński et al. 2018).

This definition needs to be elaborated further by **(a)** underlining the *polysemiotic* character of pantomime, **(b)** the fact that the dominant sign system in pantomime is *gesture,* and **(c)** pointing out that such 'pantomimic gesture' is a gradient phenomenon, also with respect to conventionality. We turn to **(b)** and **(c)** in Section 5, but first it remains to clarify our concept of pantomime with respect to demonstration, vocalizations and (proto)drawing.

4.3 Demonstration, vocalizations, and drawing

Gärdenfors (2017) highlights the similarities between pantomime and 'demonstration', by which he means a teacher performing an action for the benefit of a student. He defines it as follows:

> **(D1)** The demonstrator actually performs the actions involved in the task.
>
> **(D2)** The demonstrator makes sure that the learner attends to the series of actions.
>
> **(D3)** The demonstrator intends that the learner perceives the right actions in the correct sequence.
>
> **(D4)** The demonstrator exaggerates and slows down some of the actions in order to facilitate for the learner to perceive important features.

On the one hand, demonstration differs from practical action, since its main goal is not a practical end, but for the student to understand how to perform such actions. Further, Gärdenfors underlines the mimetic nature of demonstration, involving conscious (volitional) use, other-directedness, and 'mind-reading'. Demonstration bears a strong similarity with pantomime, since criteria D2-D4 can function almost verbatim as criteria for defining pantomime, substituting 'addressee' for 'learner'. However, D1 is clearly absent in pantomime, given that in the latter the communicator at best 'pretends' to perform the actions, without actually doing so. This leads Gärdenfors to conclude that

5. Interestingly, they use very similar vocalizations during their hunt, to lure the corresponding animals. Here, their signs are obviously not intended to be understood as such by the animals, but as signals, and are hence a clear case of deception.

pantomime is a form of pretence (Leslie 1987). If so, it is a very special form, as the intention of the communicator is to have this 'pretence' understood as such, in line with (3) in the definition of mimesis.

Returning to the definitions from above: pantomime, but not demonstration, implies triadic mimesis, and consequently sign use, in the semiotic system of gesture. Considering the definition of sign use given in Section 2, in pantomime the bodily action (i.e. the gestural expression E) is meant to bring into focus what the bodily action denotes, rather than the action itself. In demonstration, on the other hand, the student must attend to the bodily action itself to be able to learn it as best as he or she can. Thus, despite the similarity between the two behaviours, and their basis in bodily mimesis, they are importantly different. Evolutionarily, demonstration can at best be considered a precursor of pantomime.

What about the status of vocalizations and drawing in pantomime, given that we defined it as a communicative system that is dominated by gesture, but is nevertheless polysemiotic? Using the distinction between signs and signals, as defined in Section 2, it is reasonable to assume that at an initial stage of pantomime, vocalizations served as signals, with features such as little volitional control and dyadic nature, similarly to the vocal calls of non-human animals, such as alarm and food calls. The basis for this conjecture is evidence for greater volitional control of the body than of the vocal apparatus in the great apes, and presumably in the 'last common ancestor' (Tomasello 2008). This has been challenged (e.g., See 2014), but the exact degree of voluntary control of vocalization is not essential. More important is to acknowledge that with evolutionary time, vocalizations would inevitably have come under *increased* volitional control, and assumed the status of expressions in sign-relation. This is also implied by Donald's notion of 'voco-mimesis' (Donald 2013).

For example, consider the Bayaka nomads of the Western Congo Basin, who typically incorporate the vocalizations of the hunted game into their hunting narratives (Lewis 2014). This is clearly based on the basic mimetic ability to produce self-initiated and representational acts, with the vocalization denoting the corresponding animal on the basis of an iconic ground, i.e. triadic mimesis.[5] In the further evolution of polysemiotic communication, pantomime would inevitably have comprised such vocalizations, which would have contributed to the overall message.

In fact, this can be seen as the process towards the evolution of speech, given that recent research shows that an iconic ground is to a considerable extent present along with a symbolic one across many languages (Ahlner and Zlatev 2010; Dingemanse 2012) and that it can contribute to successful communication, in particular with respect to movement-related concepts (Imai and Kita 2014). On the other hand, gesture has a greater potential for 'bootstrapping' a communication system than non-linguistic vocalization (e.g. Fay et al. 2013; Schouwstra et al. 2019). Further, when gesture is combined with non-linguistic vocalizations, this does not necessarily increase the accuracy in identifying communicated meanings over the purely gestural communication (Fay et al. 2014; Zlatev et al. 2017). Such findings support our claim that gesture played a dominant role compared to vocalization in pantomime, at least in its early stages.

As for depiction, it should be noted that the definition of triadic mimesis applies to bodily acts, and not to their products. Thus, an already completed painting would not qualify as triadic mimesis. Indeed such 'exograms' were considered by Donald to evolve at a much later stage, following rather than preceding language. The cross-cultural phenomenon of sand drawing, however, has helped focus attention on *depiction as a process,* produced more or less spontaneously in an interactive context (Green 2014). Thus, a gesture that leaves a

trace on a surface could indeed be triadic-mimetic, and the relatively greater permanence of the trace (see Table 2, Section 3), would also be able to contribute to the communication of a complex message, such as a story. Hence, analogously to the case with vocalizations, we can presume that pantomime (i.e. triadic mimesis) would also have comprised at least a form of proto-depiction, which given time and appropriate context could have evolved into depiction proper.

5. Characteristics of pantomimic gesture

We have so far argued that pantomime, evolving from bodily mimesis, was the original human-specific communicative system, and that it was a polysemiotic system, with the sign system of gesture at its core. How can we characterize the nature of such gesture, and what can we say about its further evolution, analogously to the way vocalizations evolved into speech, and tracing into depiction? We introduce the notion of *pantomimic gesture* not as a specific gesture type, as used in various classifications of modern gestures (McNeill 1992, 2005; Goldin-Meadow 1999; Marentette et al. 2016), but as a label for the gestures that characterized the original form of pantomime, which as already stated, must have been maximally similar to the actions and objects they represented. In the terms of Werner and Kaplan (1963) they are the kind that must have had the least 'symbolic distance'.

To characterize these, we here adopt a number of dimensions discussed in cognitive semiotics and gesture studies, focusing on **(a)** those that have *empirical implications*, **(b)** on *complementary*

6. This appears to correspond to the notion of *autonomous gestures* proposed by Marentette et al. (2016). There is much variability in the terminology used in the literature.

dimensions, and not on terminological differences of essentially the same phenomena and **(c)** on these dimensions *as continuous rather than discrete*. That is, the dimensions may be used as criteria to classify a gesture as 'more-or-less pantomimic'. This is appropriate given our evolutionary perspective, as we conclude in Section 5.7. The first three dimensions are more general and derived from basic semiotic properties. The latter three focus on its more specific characteristics and refer to distinctions made in the gesture studies literature. While we cite some of the authors involved in developing these notions, we deviate from some of their interpretation and terms, for the sake of the points (a–c) above.

5.1 Ground: predominantly iconic

As pointed out repeatedly in previous sections, considered as a sign system, gesture is in general dominated by iconic (resemblance-based) and indexical (proximity-based) semiotic ground (see Table 1, Section 3). However, this is a macroscopic generalization, and we need to make space for qualifications for a number of cases where conventionality (i.e. symbolicity as a semiotic ground) becomes an essential aspect of gestural meaning.

First, and most obviously, there are well-known gestural emblems (Ekman and Friesen 1969; or *quotable gestures* (Kendon 1984) like the OK sign, which need to be learned more or less as words. Here, condition (4) in the definition of bodily mimesis in Section 3 is obviously not fulfilled. Second, there are *recurrent* gestures that are common in a culture, without being as conventionalized as emblems. Many iconic gestures are not just spontaneous productions, but precisely such recurrent, *typified* representations, which, interestingly, can also be seen in the gestures of 2- to 3-year-old children (Andrén 2010; Zlatev 2014c).[6] In relation to this, what is being represented, the object, also undergoes typification; for example, the way eating will be gestured in Sweden

and India will differ given that the action of eating takes different forms in different cultures. Finally, we should also mention gestures that do not represent, and thus do not function as signs, so much as help coordinate social interaction, so-called *pragmatic gestures* (Poggi and Zomparelli 1987). While these may have iconic origins (Müller 2016), they are highly conventionalized, more or less dependent on language, and hence should be classified as 'post-mimetic'.

We can then conclude that pantomimic gesture is predominantly iconic, but also at least to some degree combining a symbolic (conventional) ground, as in typification. Conventionality may be expected to increase in repeated transmission.

5.2 Iconicity type: mostly primary

Sonesson (1997) made the distinction between *primary* and *secondary* iconicity concerning the sign system of depiction, but it is more general, and can for example be applied to 'sound symbolism' (Ahlner and Zlatev 2010). In primary iconicity, the similarity between expression and object is sufficient for understanding that the former represents the latter. In secondary iconicity, it is the reverse: knowing that a given expression represents a given object is a necessary condition for the similarity to be perceived. Given this absolutely converse relation, it is natural to interpret the opposition in actual cases in terms of *proportions*: the understanding of a given iconic sign will be based on a ratio between primary and secondary iconicity, and not either-or (Giraldo 2019).

In the language evolution literature, the 'self-sufficiency' of pantomimic gesture to communicate various objects (events, properties, etc.) is often emphasized by stating that it should be comprehensible in the absence of any 'verbally established' context (e.g. Arbib 2012; Żywiczyński et al. 2018). But this does not imply that no context is needed—a pantomimic gesture that is as iconic

as possible, say one representing kissing, will be performed and interpreted differently given different conventions concerning how kissing is performed (Zlatev 2014c). In general, the gestures on the 'left side' of the dimensions described below (Table 3) can be expected to be more primarily iconic than those on the 'right side'.

Table 3. The six dimensions, as characteristics of pantomimic gestures.

Dimension	More pantomimic	Less pantomimic
Dominant semiotic ground	Iconic ground	Symbolic ground
Type of iconicity	More primary iconicity	More secondary iconicity
Body	Using more of the body	Using less of the body
Viewpoint	Mostly first-person	Mostly third-person
Space	Action in peripersonal space	Action in extrapersonal space
Modes of representation	More Enacting	More Embodying and Tracing

5.3 Body expression: typically the whole body

Many everyday actions, such as walking, pushing, jumping etc., involve coordinated muscular activity across the entire body, and to represent these as iconically as possible would require a similar use of the whole body. For this reason, Żywiczyński et al. (2018) proposed 'whole-bodiness' as an important part of the definition of pantomime. It should be stressed, however, that this requirement concerns *pantomime as a communicative system* and does not need to hold for every individual instance of pantomime, so it is compatible with regarding gestures made with only the hands and arms, or even only with the head as pantomimes (e.g. Gärdenfors 2017; Brown et al. 2019). Rather than framing this as a terminological issue, we can again see this dimension as a gradual one. In other words, the greater the involvement of the entire body in a gestural representation, the more pantomimic it is. But even just opening one's mouth to enact eating is to some degree pantomimic.

5.4 Viewpoint: mostly first-person

McNeill (1992) famously distinguished between gestures performed from a *character* and from an *observer viewpoint*. In the first case, the gesture 'incorporates the speaker's body into the gesture space, and the speaker's hands represent the hands ... of a character' (McNeill 1992: 119). In the second, the gesture 'excludes the speaker's body from the gesture space and his hands play the part of the character as a whole' (1992: 119). Analogously, Zlatev and Andrén (2009) distinguished between first-person perspective (1pp) and third-person perspective gestures (3pp), where the first display 'explicit or implicit mapping of the whole body onto the signified, even if only a part of the body is thematic'. Note that the last qualification implies that even a 'part-body' gesture can be 1pp. For example, a pantomime of hammering (Figure 1) primarily relies on the movements performed with the dominant hand.

Figure 1.

Hammering represented by a first-person perspective gesture (1pp).

In the case of 3pp gestures, 'the articulating parts of the body figure as observed objects, isolated from the rest of the body' (McNeill 1992: 387). To revert to the example of hammering, the use of 3pp could consist in a clenched fist of the dominant hand representing the hammer, performing the hammering movement against the palm of the non-dominant hand **(Figure 2)**. Finally, Brown et al. (2019)'s distinction between 'egocentric' and 'allocentric' gestures amounts to the same difference in viewpoint: the former are performed 'with reference to the position and orientation of a person's body', while the latter: 'with reference to objects and their surrounding environment' (p. 3).

Figure 2.

Hammering represented by a third-person perspective gesture (3pp).

Here we use the terms ‘first-person’ (1pp) and ‘third-person’ (3pp) as more neutral and less loaded, as the other pairs have unwanted associations. Note that this does not say anything about the number of people whose perspective is taken. For example, when representing a transitive event, e.g. pushing somebody, the gesturer can adopt a two-person strategy (Adornetti et al. 2019), whereby first

Agent, and then Patient is represented, but in each case adopting an appropriate 1pp gesture. Or consider gesturing the transitive event of being strangled by somebody, by applying your hands onto your neck; here, your body, with the neck as the focal part, represents the Patient while the hands represent the action performed by some distinct Agent **(Figure 3)**.

Figure 3.

A 1pp gesture of a transitive event employing a 2-person strategy and incorporating both Agent and Patient.

In general, pantomimic gesture can be expected to be more 1pp rather than 3pp, and for a transition from the first to the latter to take place in evolution, with the increase of 'symbolic distance' and conventionalization. Not so much as an argument for this claim, but as an illustration of this transition on a parallel level, it has been shown that children's first iconic gestures are 1pp (McNeill 1992; Zlatev 2014c), while 3pp gestures dominate the co-speech gestures

of adults. Skarphedinsdottir (2019) observed a transition from 1pp to 3pp in the 4th year of life of three Swedish children.

5.5 Space: mostly peripersonal

Brown et al. (2019) have recently proposed a complex classification scheme for pantomime that partly overlaps with ours, but it would take us too far aside to make a detailed comparison. We simply borrow one dimension that is distinct from the others we discuss. As mentioned in Section 5.4, their distinction of 'egocentric' versus 'allocentric' gestures corresponds to the distinction 1pp versus 3pp. In addition, they propose that this distinction corresponds to another distinction: gestures representing actions in *peripersonal space* (i.e. the space immediately surrounding one's own body) versus gestures representing actions in *extrapersonal space* (i.e. the space far from one's body, see Cléry et al. 2015). But the two pairs (1pp/3pp and peri/extrapersonal space) do not overlap. For example, it is possible to have 1pp gestures in the case of 'personification gestures' (see below), where one pretends to be a bird, a tree, a house, etc.—objects that are clearly in the extrapersonal space. Conversely, it is possible to include 3pp gestures (e.g. the hand representing a mirror) in a gesture of an action that takes place in peripersonal space: observing oneself in a mirror. Alternatively, we could decide that this is primarily 1pp (and peripersonal), but that it combines a different mode of representation (see Section 5.6). Once more, we can say that the peripersonal/extrapersonal space dimension constitutes a cline, and that pantomimic gestures will tend to be of the first kind (overlapping in part with 1pp), but not exclusively so.

5.6 Mode of representation: mostly enacting

Over a number of publications, and with various terminologies, Cornelia Müller (e.g. 2013, 2016) has distinguished between 'modes of representation' that are not based on viewpoint or space, but on how properties of gestures map onto properties of the objects that are represented. At least five such modes can be distinguished, and we separate 'tracing' and 'drawing', which are conflated by both Müller (see above) and Brown et al. (2019):

In the *Enacting* mode, the body of the gesturer strictly maps onto the (human) body of the object. This mode is thus appropriate for representing 'actual manual activities, such as grasping, holding, giving, receiving, opening a window, turning off a radiator, or pulling an old-fashion gear shift' (Müller 2013: 128).

- *Moulding* consists in using the hands to shape a 3-dimensional 'transient sculpture' of an object (e.g. a bowl).

- In *Embodying*, the hand or hands are used to stand for an object as a whole.

- In the case of *Tracing*, the gesture follows the path of a moving object.

- In *Drawing*, it makes a 2-dimensional outline of the shape of an object.

Again, it is important to point out the principled independence of this dimension compared to these above, even if there may be (strong) tendencies for co-occurrence. Enacting gestures can be 1pp, as in the case where there is an almost one-to-one mapping between the gesture and the corresponding action **(Figure 1)**, but

enacting gestures can also be 3pp, as when one is pretending to be strangled by someone else **(Figure 3)**. Embodying gestures are usually 3pp as in Figure 2, but it is also possible to use 1pp gesture with the Embodying mode, as when one pretends to be an inanimate entity, such as a house **(Figure 4)**.

Figure 4.

A 1pp embodying gesture ('being a house').

A case in point is a special kind of enacting gesture known as personification, which maps 'the body of a non-human entity onto the human body, using the human head to represent parallel locations on a non-human head, the human body to represent a non-human body, and human appendages to represent non-human appendages' (Hwang et al. 2017: 4; Ortega and Ozyurek 2019). For example, the gesturer's head would be mapped onto the bird's head, the gesturer's body onto the bird's body and the gesturer's hands onto the bird's wings **(Figure 5)**. This gesture is performed with the whole

body (Section 5.3), with a 1pp viewpoint (Section 5.4), but represents something in the extrapersonal space (Section 5.5), since flying is not something that the human body affords.

Figure 5.

Personification: 1pp, extrapersonal space, enacting gesture ('flying as a bird').

Moulding also does not correspond neatly to one of the previous dimensions. It has a 1pp aspect in that the hands are shaped as-if 'holding' the object, but also a 3pp aspect: the invisible object. An Embodying gesture, on the other hand, can be performed from 1pp viewpoint representing something in extrapersonal space **(Figure 4)** or from a 3pp viewpoint representing something in peripersonal space, as in a 'phone me' gesture, when the hand takes the shape of a telephone **(Figure 6).**

Figure 6.

A 1pp embodying gesture, which brings extrapersonal space into peripersonal space.

Finally, Drawing and Tracing modes would normally correspond to 3pp viewpoint and to extrapersonal space, but if one is pretending to draw on a surface, one could argue that at least the latter takes on a 1pp viewpoint, and the whole gesture concerns an action in peripersonal space.

5.7 Summary

The six dimensions discussed in this section were described as clines, and shown to be at least in part independent of one another. We can thus use them, as shown in **Table 3**, to characterize *the degree to which an individual gesture can be described as pantomimic*: the more features it has on the left side, the more pantomimic it will

be. At the same time, as the first dimension (semiotic ground) is not absolute but proportional, so are the others: the more of the body as part of the expression, the more 1pp dominates, the more peripersonal space, the more Enacting mode of representation—the more pantomimic the gesture will be. This gives us a set of empirically definable criteria through which we can characterize the nature of pantomimic gesture. As for the evolution from pantomimic to modern gestures, this can be envisaged as a progression from the left to the right side in **Table 3**, not in the sense of the first kind 'disappearing', but rather as the latter appearing as a layer 'on top' of the former. In a very general sense, such a progression is what we observe in studies on the conventionalization of bodily-manual communication through repeated use, such as in emerging signed languages (e.g. Mineiro et al. 2017) and laboratory experiments in the 'silent gestures' tradition (e.g. Motamedi et al. 2018).

6. Summary and conclusions

In this article, we have proposed to reframe one of the key questions in the field of language evolution: from *What was the original protolanguage?* to *What was the original human-specific communicative system?* The difference is not only terminological. While the notion of 'protolanguage' has remained controversial over the past decades, that of a communicative system should be less so. We defined it as consisting of either a single semiotic system, making it monosemiotic, or of multiple such systems, and thus polysemiotic. Further, we defined semiotic systems as either consisting of signs or of signals. Language and gesture are examples of sign systems, while alarm calls and spontaneous facial expressions exemplify signal systems.

With the help of cognitive semiotics, we clarified the difference between signals, which characterize animal communication, and signs, which do not replace but complement signals in human communication, allowing a number of distinct semiotic features, and in particular *denotation*, implying awareness of the Expression–Object directed link. This, on its side, underlies the ability to *lie*, as opposed to simply deceive. Further, we argued that the evolution of (bodily) mimesis was what allowed for signs to emerge in hominin evolution, as well as the social-cognitive skills needed to support them, including advanced imitation, skill rehearsal, and cultural learning. We described how pantomime should be seen as naturally evolving from mimesis, as a polysemiotic communicative system, dominated by gesture but also including vocalizations, facial expressions, and possibly the rudiments of depiction.

We conclude that pantomime was the most likely original human-specific communicative system, both in terms of temporal primacy, and in the sense that it was the relatively undifferentiated whole from which modern human systems emerged. This common origin could possibly be considered as one of the factors that keep different sign and signal systems aligned into complex polysemiotic communication, including the well-known alignment between language and gesture.

Concerning language evolution, our main thesis of pantomime as the original human communicative system is consistent with pantomimic accounts of language origin (Arbib 2012; Levinson and Holler 2014; Zlatev et al. 2017; Żywiczyński et al. 2018), which emphasize that language arose primarily out of visually perceived communicative action, with iconic gesture playing the dominant role in transmitting referential information. But it extends these by both characterizing more explicitly the notion of pantomime, and by emphasizing that the 'target' of the evolutionary process is not simply language, but modern

polysemiotic communication – and above all the interaction of language, gesture and depiction (Zlatev 2019).

The implications of our 'pantomime-first' proposal go against claims that the original 'protolanguage' was monosemiotic: either vocal (e.g. Dunbar 1996), or gestural (e.g. Corballis 2002). However, it also contradicts so-called 'multimodal accounts' of language emergence, which stress a tight integration and equipotentiality of sign systems from the very beginning, as in the case of McNeill's 'growth point' theory (McNeill 2012) or Kendon's 'speech-kinesic ensemble' (Kendon 2014), given that we claim that gesture was the fundamental component of pantomime. We spelled out six different dimensions that can help characterize *prototypical* pantomimic gesture as: (1) mostly iconic, (2) with primary iconicity dominating, (3) using the whole body, (4) performed from a first-person perspective, (5) concerning actions or objects in peripersonal space, and (6) using the enacting mode of representation. The conventionalization of gesture and its establishment as its own semiotic system can be characterized as changes along these six dimensions, in the direction away from prototypical pantomime.

To conclude, this article has offered a number of novel ideas to the field of language origins. Conceptually, we have endeavored (1) to clearly define the distinction between signals and signs, with an explicit theoretical definition of the latter, (2) to distinguish two kinds of semiotic systems: signal and sign systems, and describe how they can combine to form polysemiotic communicative systems, (3) to define pantomime as a polysemiotic communicative system, and (4) specify features of its core system gesture, on the basis of specific dimensions. Empirically, we have brought these concepts, along with evidence supporting the pivotal role of bodily mimesis in human evolution, to make the claim that pantomime, as here described, was the first communicative system that was based on signs rather than

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Extra reading

1. Prelectura

El siguiente abstract contiene ciertas conceptualizaciones sobre las cuales leíste en los **capítulos 1 y 2.** ¿Cuáles podrías inferir a partir del encabezado?

Enacting memories through and with things: Remembering as material engagement
July 2022 Memory Studies DOI: 10.1177/17506980221108475 LicenseCC BY 4.0
Emanuele Prezioso & Nicolás Alessandroni

2. On the fly

¿Sobre qué trata este abstract?

Abstract. For mainstream theories, memory is a skull-bound activity consisting of encoding, storing and retrieving representations. Conversely, unorthodox perspectives proposed that memory is an extended process that includes material resources. This article explains why neither representationalist nor classical extended stances do justice to the active and constitutive role of material culture for cognition. From Material Engagement Theory, we propose an alternative enactive, ecological, extended and semiotic viewpoint for which remembering is a way of materially engaging with and through things. Specifically, we suggest that one remembers when one updates their

interactions with the world, a form of engagement previously acquired through sociomaterial practices. Moreover, we argue that things are full-fledged memories, since they accumulate and bring forth how we have materially engaged with them over different timescales. Last, we highlight the need for studies considering the cognitive ecologies where remembering takes place in its full complexity.

From: https://www.researchgate.net/publication/361797775_Enacting_memories_through_and_with_things_Remembering_as_material_engagement

3. Poslectura

1. Utilizando corchetes y rótulos, identifica los diferentes **pasos y segmentos** existentes en este resumen.

2. Para cada oración, identifica los procesos, **participantes y circunstancias.** También identifica el **tema y el rema**.

3. Identifica las formas en que se han incluido **voces (cualquier forma de inclusión de citas o alusiones)** en este abstract.

4. Identifica la forma predominante de voz gramatical (ver Unidad 3) ¿para qué podría ser la que sus autores prefirieron?

5. Vocabulario

Explica *la diferencia* entre los siguientes:

a) Mainstream vs. unorthodox:

b) Skull-bound vs. extended:

c) With vs. through:

Explica el significado de los siguientes:

d) Full-fledged: _____

e) Engagement: _____

Aplica lo que conocés sobre conectores lógicos y menciona el tipo de relación lógica y además entre cuáles segmentos del abstract cada uno de estos conectores establece una relación.

Conversely: El tipo de relación lógica es de... entre... y....

_____

_____

Neither... nor

_____

_____

Specifically

_____

_____

Moreover

_____

_____

Last

_____

_____

UNIDAD 3

Tus *abstracts* y *papers* de Psicopedagogía

A lo largo de **Lengua Extranjera 2**, trabajamos con ejemplos de *abstracts* de variada índole. Seguramente, los *abstracts* que te resulten más interesantes y más fáciles de comprender tendrán que ver con tu (futuro) TFL, su marco teórico, autores y referentes del ámbito más estrecho.

Cuando buscamos bibliografía en inglés, la primera discusión de fondo es sobre la *justicia epistémica*[12], el papel del inglés como *lingua franca*, así como el derecho al conocimiento vs. el conocimiento como mercancía[13]. Estas lecturas para la licenciatura en PSP son también lecturas en inglés para tu vida profesional ∞ y podrían ser además tus lecturas por puro disfrute.

12. Sobre justicia epistémica en educación https://observatorio.tec.mx/edu-news/injusticia-epistemica/ y el rol del inglés como lingua franca https://www.tandfonline.com/doi/full/10.1080/09515089.2023.2284243?src=.

13. Pensamos en alternativas *desde el Sur*. En The Tempest (1.2.364–366), de Shakespeare, Caliban se dirige a Prospero-Miranda: “You taught me language, and my profit on’t is, I know how to curse.”

Actividad 1

¿Sabés buscar bibliografía en inglés?

Tanto en bibliotecas (p. ej., de la FES) como también en bibliotecas online, algunas cuestiones son especiales al buscar bibliografía *en inglés*.

Objetivo: encontrar uno (o varios) ***abstracts* de una publicación originalmente escrita en inglés** que sea interesante y/o útil para tu TFL. Descartá el resumen en inglés de artículos escritos en castellano (o portugués) porque ya los podés entender y además porque lamentablemente no siempre están bien traducidos. Nuestro horizonte aquí es poder explorar *artículos que no estén traducidos al castellano* y sean importantes para tu TFL y tu carrera profesional. Para construir nuestra biblioteca es mejor buscar textos escritos directamente en inglés, y, además, para complejizar la mirada de un mismo fenómeno: The more, the merrier: cuantos más *papers* en inglés sobre el mismo fenómeno, ¡mejor!

Siempre guardá la fuente, DOI y/o link de descarga de la publicación, para cada buena publicación que encuentres.

Para realizar esta búsqueda de *abstracts* de publicaciones relevantes, aquí van sugerencias y pasos para empezar:

▶ Step 1

Armar un mini-glosario con los términos importantes en inglés.

Pensá cuáles **palabras claves** en inglés serían importantes para dar con los *papers* (y sus correspondientes *abstracts)* que más se relacionen con tu TFL.

Primero, el punto de partida es pensar en las formas equivalentes en inglés del ***título*** *de tu TFL*. Aquí hay que prestar atención especial al uso de palabras reales en inglés, con ortografía correcta, es decir, evitar caer en las malas traducciones existentes a las que nos hemos referido.

En segundo lugar, podés realizar una búsqueda por ***autor:*** los apellidos de autores relevantes, de aquellas personas que ya sabemos que son referentes en el área, por sus antecedentes o porque estén trabajando exactamente con nuestros mismos conceptos claves.

Una tercera manera para armar el mini-glosario es por el campo o ***área*** de interés en inglés. Esta estrategia es un tanto más general, por lo tanto puede resultarle útil a quienes todavía no hayan definido su TFL, o estén en ese proceso. Puede que esta estrategia te lleve a encontrar demasiados tipos de investigaciones abordadas desde múltiples ángulos y, por ende, debas recortar la búsqueda de alguna manera. Sin embargo, una ventaja es que también te puede ofrecer una mirada general sobre todas las investigaciones que se están realizando en el área.

▶ Step 2

Buscar online

Con el glosario que construiste, podés realizar distintas búsquedas utilizando diferentes combinaciones de las palabras claves. Podés buscarlas en sitios tradicionales y revistas. Algunos sitios que pueden servir para búsqueda de literatura pertinente son *PubMed, Google Scholar e Insight*. Para mapas de conocimiento: *Research Rabbit, Connected Papers y Lateral*. Para citaciones: *Zotero, Mendeley y PaperPile*. También podés tener en cuenta las "redes sociales" de autores contemporánexs angloparlantes que suben sus propias producciones para compartir, tales como *ResearchGate y Academia.edu*. Tené en cuenta que esta búsqueda es una tarea que lleva un cierto tiempo, ya que encontrar material que podría conformar tanto bibliografía de consulta como bibliografía principal de tu TFL es una parte importante de

la realización del TFL en sí mismo, conformando el marco donde sostener nuestros posicionamientos sobre el aprendizaje desde una mirada compleja.

Recomendaciones:

Tip 1: Evitar las así llamadas revistas predadoras, que son de mala calidad con escaso o nulo trabajo editorial. Una forma de verificar esto es tomar nota de la revista que publicó el paper y googlear: ***"Is (nombre de la revista) predatory?"***

Tip 2: Idealmente, es ideal que el paper sea bastante actual, preferiblemente de los últimos cinco a diez años. Excepción: lecturas clásicas, fundantes o canónicas, que no tienen tiempo.

Tip 3: Guardá tus papers: ¿dónde guardas tus lecturas? Es una buena idea construir una biblioteca personal como respaldo, en una carpeta digital.

Mujeres leyendo de una computadora portátil.

https://www.pexels.com/photo/woman-wearing-red-top-holding-silver-macbook-1181722/

Actualmente, las cinco **revistas académicas más prestigiosas sobre Psicopedagogía** son:

• **Contemporary Educational Psychology Journal of Educational Psychology** https://www.sciencedirect.com/journal/contemporary-educational-psychology

• **Educational Psychology Review** https://www.springer.com/journal/10648

• **Journal of Educational Psychology** https://www.apa.org/pubs/journals/edu

• **Educational Psychologist** https://www.tandfonline.com/toc/hedp20/current

• **Cognition and Instruction** https://www.tandfonline.com/journals/hcgi20

¡Pero hay muchas más! Aunque es más general y variada en su temática sobre Psicología, *Behavioral and Brain Sciences*[14], por ejemplo, ofrece una dinámica particular de diálogo e intercambio de ideas: cada artículo publicado tiene comentarios de diferentes colegas investigadores, y además la respuesta de les autores originales a estos comentarios.

Para inspirarte en relación con tu TFL, un sitio que puede interesarte es: http://www.theharvardbrain.com/ Tiene ensayos y **estudios escritos por estudiantes de grado de cualquier universidad del mundo**, editado por les propies estudiantes de la universidad de Harvard.

The Harvard Brain is an undergraduate academic journal with an international readership dedicated to the study of mind, brain, and behavior (MBB). We serve as a platform for undergraduates to examine human behavior and mental life from a wide range of perspectives, including (but not limited to): Computer Science History and Science, Human Evolutionary

14. https://www.cambridge.org/core/journals/behavioral-and-brain-sciences

Biology, Linguistics, Neuroscience, Philosophy, and Psychology. These are the seven fields that make up the Harvard MBB Interfaculty Initiative.

Busca lo que necesites para tu TFL y descubrí cuáles revistas académicas que ofrecen mejores perspectivas:

Si encontraste abstracts de artículos en español o en portugués, o de personas que no son hablantes en inglés, tal vez es porque usaste palabras que no se utilizan habitualmente en el acervo cultural del inglés, p. ej., **“psychopedagogy”**, calco del español que no se utiliza en inglés. Solución: usá **palabras claves de búsqueda que sí se utilicen en inglés.** El asterisco marca error: **Psychopedagogy** and its facilitating...; **Psychopedagogue**... > en su lugar, utilizá los términos que conocés: *Educational Psychology, educational therapist, educational counsellor/counselor,* etc.

▶ Step 3

Analizar para comprender

Lo que sigue es lo que subirás como respuesta a tu Trabajo Práctico de Lengua Extranjera: la selección de **un paper** (o un libro), **su origen** (el link, el DOI o el sitio de descarga), con su título y les **autores** del artículo. Siempre hay que verificar que el paper esté escrito en inglés.

Para dar cuenta de la **comprensión** de un paper en inglés y construir vínculos con el futuro TFL, hay que distinguir sobre qué trata, es decir, *el contenido*, sus *partes*, así como también reconocer e identificar la *jerarquización de las ideas que contiene.* Para ello, cabe destacar el uso de todos los recursos disponibles en casa, saber usarlos adecuadamente y llevar a la consciencia tal uso. También es importante percatarnos de *cómo* estamos leyendo el paper, utilizando *estrategias* de lectura **por oración temática, skimming, scanning,** así como nuestras **motivaciones.**

En el *abstract*, **identifica sus partes entre corchetes, con claridad.** Tal vez estén todas las partes, tal vez algunas o la mayoría. Asegurate de incluir el título y autores y de que sea **legible** después, al compartirlo, tanto por el tamaño de la letra como tu análisis.

Mucha gente concibe el resumen como un mini-artículo, es decir, como una versión abreviadísima de lo que será un trabajo, informe o artículo, que contiene cada una de sus secciones más importantes. En esta unidad, que es transversal a todo el cuatrimestre, trabajaremos la búsqueda de *papers* útiles para nuestros propósitos y analizaremos las partes de un abstract en relación con la publicación de la cual es parte.

Un *resumen* o *abstract* típicamente ofrece a les lectores un avance de los siguientes componentes del trabajo (artículo o paper, tesis, reseña, etc.) total:

- *Introducción*

- *Materiales y métodos*

- *Resultados*

- *Discusión*

También debería indicar los *objetivos* principales y el *alcance* de la investigación, una descripción de los *métodos* empleados, resumen de los *resultados* y las *conclusiones* más importantes. A veces los resultados son separables de la conclusión, dependiendo de si hubo datos o muestras, si se tratara de una investigación cuantitativa y/o cualitativa, del tipo de tratamiento y del *alcance*. Si no está mencionado explícitamente, verificar si el estudio fue exploratorio, descriptivo, correlacional o explicativo. En el ámbito de las humanidades, el *resumen académico* no siempre se parece a un resumen de otras disciplinas, tales como la agronomía o la biología. Sin embargo, podemos predecir una estructura organizada aproximadamente en estos términos.

En el plano de la comprensión textual, por lo general, un ***abstract*** comienza con una o dos oraciones que introducen el ámbito de interés. Estas oraciones tienen una aproximación general y pueden ser comprendidas por personas que se dediquen a investigar en cualquier disciplina científica. Luego, siguen algunas oraciones más que explicitan o ciñen el marco del estudio con un mayor grado de detalle. Esta segunda parte suele ser más fácil de comprender si trabajas en disciplinas científicas relacionadas. Tras estas oraciones, una se destaca por explicitar claramente el problema general del presente estudio. Luego, sigue otra oración que resume los resultados de la indagación, que luego se expande en dos o tres oraciones más

donde se revela cómo esos resultados son diferentes de lo esperado o en qué sentido aportan algo más a los saberes disciplinares previos o tradicionales. Se podría concluir poniendo estos resultados a la luz de un contexto más general, cuya importancia puede ser comprendida por investigadores de cualquier disciplina científica.

▶ Step 4

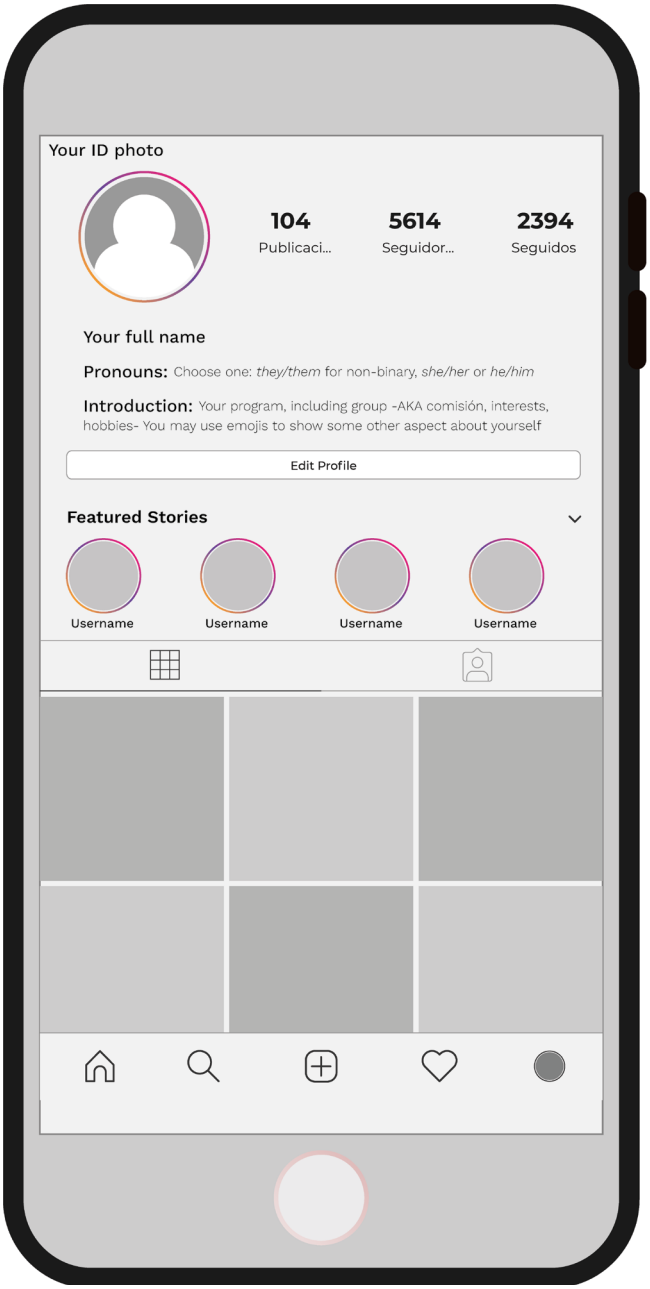
Subir el abstract + análisis como trabajo práctico → → → aula virtual

Todos tus TPs serán subidos al aula virtual, siempre en respuesta a ACTIVIDADES de modo que queden registradas en esa sección (no se reciben por correo ni en papel).

En cada clase presencial, vas a recibir feedback, a partir del cual vas a considerar los errores comunes y a editar/mejorar cada uno de tus TPs, confeccionando gradualmente tu portafolio. Tu trabajo y participación consistente son fundamentales.

No olvides completar *todos* tus datos personales en inglés como portada/ perfil de tu futuro portafolio, en una hoja aparte:

Portfolio cover



Your ID photo:

Your full name

Pronouns: (choose one: *they/ them* for non-binary, *she/her* or *he/him*)

Introduction: (your program, including group -AKA comisión, interests, hobbies. You may use emojis to show some other aspect about yourself)

Estudiantes highfiving con profesora.

https://www.pexels.com/photo/cheerful-multiethnic-students-having-high-five-with-teacher-5940841/

Actividad 2

1. Prelectura

¿Qué es un abstract (resumen) y qué tipo de información contiene?

2. On the fly

Lee el siguiente resumen ¿cuál es el tema general?

Psychiatric problems are an increasing concern for youth in the United States, with these concerns targeted by school-based social-emotional learning programs. One intervention that may address these concerns is Dialectical Behavior Therapy (DBT) skills groups, an evidence-based treatment that may remediate youth psychiatric problems. Adapting DBT skills groups for schools and colleges may increase the accessibility of mental health interventions for youth. In this systematic review, seven studies were examined to determine the effectiveness and acceptability of standalone DBT skills groups as a school-based treatment for psychiatric problems. Preliminary effectiveness for school-based DBT skills groups in reducing

psychiatric problems in youth (e.g., aggression, depression) was found in four college studies and in two primary/secondary school studies. Four studies reported preliminary acceptability for the intervention. Numerous methodological shortcomings (e.g., lack of fidelity to DBT protocols and blinded outcome measures) should be addressed with future research. Consistent effectiveness was found in college samples, but the lack of generalizable samples and mixed results precludes a strong statement about the effectiveness of DBT skills groups in primary/secondary schools. Nevertheless, this intervention shows some promise in remediating psychiatric problems in youth. More research should be conducted to elucidate the effectiveness and acceptability of this intervention.

3. Postlectura

Tras una lectura cuidadosa, responde:

3.1 ¿Qué es DBT, de acuerdo con el texto? _____

_____

_____

3.2 Identifica las diferentes secciones que contiene el resumen, marcándolas cuidadosamente entre corchetes indicando las correspondientes letras:

A) Introducción

B) Estudio actual.

C) Materiales y Método

D) Resultados.

E) Discusión y conclusión

3.3 ¿Cuál es la meta principal del abstract?_____

_____

_____

3.4 Explique el significado de las siguientes frases:

a) Accessibility of mental health interventions_____

_____

_____

b) Preliminary effectiveness_____

_____

_____

c) Numerous methodological shortcomings _____

_____

_____

d) Blinded outcome measures _____

_____

_____

Follow-up

4.1 La **sección que sigue** es un extracto del artículo donde está este resumen. Entre A y E ¿a cuál de esas secciones corresponde? Justifica.

_____

_____

_____

4.2 ¿Quién(es) examinaron los siete estudios mencionados?

4.3 ¿Quién(es) implementaron DBT y dónde?

4.4 ¿Cuál es la audiencia a la que está dirigido este resumen?

4.5 ¿Qué tipo de autor/a lo escribió?

4.6 Propone un título posible

Sección/extracto del artículo

> There remains a growing need to address increasing psychiatric problems in youth, with the implementation of DBT skills groups in school settings a viable option. This review aims to address gaps in the existing literature on the effectiveness of school-based DBT skills groups for youth through a systematic review of the literature.

More specifically, the current review will identify not only which DBT skills have been successfully implemented in school settings, but also which youth outcomes have been impacted by treatment with standalone school-based DBT skills groups.

Finally, this review carefully examined the methodology of studies using DBT skills groups in school settings (e.g., sampling procedures, adherence to DBT STEPS-A, control groups) with an eye for unanswered questions necessitating future research.

Voz gramatical.

En inglés, la voz gramatical puede ser activa, pasiva o ergativa. En general, en los textos académicos nos encontramos con los usos de tanto la voz activa como también la voz pasiva. En castellano, formamos la voz pasiva con el verbo ser (algo *es hecho* o algo *ha sido realizado*, etc.) y la pasiva con "se" (Algo *se hizo* o *se ha hecho algo*, etc.). En inglés no existe un equivalente a la pasiva con "se". En inglés académico, prevalece el uso del verbo **be**, p. ej. something **is done**, something **was done**, etc.

Cuando el sujeto gramatical es el sujeto lógico, es decir el *actor* que realiza la acción *material* designada por el verbo principal, o, como vimos, es *carrier* de un proceso *relacional*, o *sayer* de un proceso *verbal,* etc., decimos que la voz es activa.

Ejemplos de voz activa

a) *Psychiatric problems are an increasing concern for youth in the United States, with these concerns targeted by school-based social-emotional learning programs.*

b) *One intervention that may address these concerns is Dialectical Behavior Therapy (DBT) skills groups, an evidence-based treatment that may remediate youth psychiatric problems.*

Sin embargo, muchas veces quienes producen los textos que leemos, optan por la **voz pasiva** porque desean poner el **énfasis o foco en la** *acción* **y no en quién la realiza.** En algunos casos, el Sujeto Lógico se desenfoca o incluso desaparece, por varias razones: porque *es obvio* quién realiza la acción, porque *no tiene importancia* quién la realiza, o porque *no se conoce* quién realiza la acción. Estos son los usos típicos de la voz pasiva. Sin embargo, sería repochable que les autores de un texto deliberadamente *oculten* quién realizó una acción mediante la omisión del complemento agente en la voz pasiva.

En la voz pasiva en inglés, puede no aparecer el actor, carrier, sayer, etc. De hecho, es muy frecuente que no aparezca en absoluto. Pero si se le menciona, aparece como *complemento agente* precedido por "by". Identificar el sujeto lógico (actor, carrier, sayer, etc.), *a pesar de que no esté explícito*, es fundamental para comprender *de quién se está hablando* en un texto. En el discurso académico, la función de la voz pasiva se activa para añadir claridad respecto a lo realizado o al nuevo conocimiento, en lugar de enfocarnos en las personas que llevaron a cabo ciertas actividades.

Ejemplos de voz pasiva

c) *In this systematic review, seven studies* ***were examined*** *to determine the effectiveness and acceptability of standalone DBT skills groups as a school-based treatment for psychiatric problems.*

d) *Preliminary effectiveness for school-based DBT skills groups in reducing psychiatric problems in youth (e.g., aggression, depression)* ***was found*** *in four college studies and in two primary/secondary school studies.*

¿Quiénes realizaron las acciones de *examine* y de *find* en **(c)** y **(d)**?

c) _____

d) _____

Con la voz pasiva, a veces se pretende enfatizar el hecho de que **algo sucede en un momento dado o con un cierto propósito**, sin enfocarnos en quién realizó la acción.

¿Cómo reconocemos si una cláusula tiene voz pasiva? Como mínimo, la frase verbal debe contener:

Forma conjugada del verbo be + Participio Pasado
(3a columna de verbos irregulares)

Estructuralmente, la forma conjugada del verbo *be* puede darse en cualquier tiempo verbal, pasado, presente o futuro, simple, continuo o perfecto, o con cualquier verbo modal (may, might, should, etc. + *be*). El *participio pasado* es otro verbo, que se encarga de llevar adelante el significado.

Para probar si se trata de voz pasiva, podemos intentar transformar la oración y verificar su funcionamiento y sentido. Para pasar una oración de activa a pasiva, es condición necesaria que el verbo en la oración con voz activa tenga un objeto directo. Ese objeto directo va a convertirse en sujeto gramatical de la oración en voz pasiva. Cabe destacar que una oración en voz activa que no tiene objeto directo no puede transformarse a voz pasiva.

Desde una perspectiva de transformación, fijate que:

- El objeto de la oración con voz activa se transforma en el *sujeto gramatical* de la oración en voz pasiva

- Cambia la forma del verbo conjugado a *be + Past Participle*

- El sujeto de la oración en voz activa se convierte en el complemento agente de la oración en voz pasiva (by...), o con frecuencia se descarta directamente (desaparece). Atención: esta transformación debe seguir los pasos mencionados y no significa solamente dar vuelta la oración – no queremos escribir como Yoda!

e) Transformá **(c)** y **(d)** en oraciones en voz activa[15] a continuación:

f) Para pensar acerca de las noticias que oís o leés diariamente. ¿Cuáles son los posibles efectos de que les autores de los textos elijan usar voz activa en lugar de voz pasiva, mayormente? ¿Qué efectos tendría la tendencia opuesta?

15. Fuente: Day, C. M., Smith, A., Short, E. J., & Bater, L. (2022). Dialectical behavior therapy skills groups for youth in schools: a systematic review. *Adolescent Research Review,* 7(2), 267-284.

Fuentes externas

Más sobre **Voz Pasiva**

- http://www.ego4u.com/en/cram-up/grammar/passive
- https://www.ef.com/wwes/recursos-aprender-ingles/gramatica-inglesa/voz-pasiva/

Identificá voz activa y pasiva en inglés aquí (las respuestas aparecen a la derecha)

- https://www.englishclub.com/grammar/verbs-voice_quiz.htm

Juegos

- http://www.englishmedialab.com/GrammarGames/football/passive%20voice/passive%20voice.html

Nominalizaciones

¿Qué es una nominalización? Una construcción gramatical que conlleva la transformación previa de un verbo o un adjetivo (u otra categoría gramatical) a un sustantivo o frase sustantiva. El resultado es un sintagma nominal o frase sustantiva (*noun phrase*).

A veces, no es muy obvio desde cuál categoría gramatical parte, pero notamos que la categoría gramatical sustantivo o frase sustantiva, que habitualmente refiere a cosas, personas o entidades abstractas, no puede tomarse literalmente como una entidad o sustancia, p. ej. 'implementation' o 'effectiveness' en el texto anterior.

Verb to Noun examples:

- Found → foundation
- Adopt → adoption
- Focus → (the) focus
- Search → (the) search
- Express → expression
- Define → definition
- Interact → interaction
- Develop → development
- Evolve → evolution

Adjective to Noun examples:

- Competent → competence
- Dynamic → dynamics
- Capable → capacity

Utilizar una nominalización genera cambios en la estructura de la oración, si se la elige en lugar de un verbo o un adjetivo. También suele generar un cambio de registro, hacia la formalidad y densidad léxica, en el afán de expresar más contenido en menos palabras. Puede ofrecer ventajas a nivel expresivo, salvo que sobreabunden –en ese caso, la existencia de muchas nominalizaciones puede hacer que el texto sea algo difícil de comprender o de seguir con atención. Este fenómeno nos sucede a veces cuando leemos artículos que provienen del discurso científico-académico.

Pros y contras de las nominalizaciones

https://www.youtube.com/watch?v=dNlkHtMgcPQ

Las nominalizaciones son útiles si

- Constituyen el sujeto que **refiere a una oración anterior**, contribuyendo a la cohesión (el entramado) del texto.

- Nombran el objeto del verbo, p. ej. puede ser mejor decir "I don't understand **his intention**" que "I don't understand what he intends".

- Abrevia frases como "the fact that..."

- Sirve para evitar redundancias o repeticiones de conceptos.

- Expresa ideas que solamente pueden aparecer como sustantivos (p. ej., revolution, taxation, abortion, love, life)

Otros ejemplos

a) We must select new members of the school board. >>>> **A need** exists for new members of the school board.

b) The Director may approve of it ahead of time. >>>> There is **a possibility** of prior approval.

c) The board reviewed and reported on the matter efficiently. >>>> There was **an efficient review and report** on the matter.

1. ¿Qué efectos tiene la versión nominalizada sobre el sujeto-actor de la acción verbal? Compará las versiones antes y después de nominalizar.

2. ¿Qué similitudes encontrás entre la nominalización y la voz pasiva?

3. Examina textos a la luz de los usos de voz pasiva subrayándolos, y de nominalizaciones, marcándolas con un círculo.

Fuentes externas

More on **nominalizations**

- http://jerz.setonhill.edu/writing/grammar-and-syntax/nominalization/

Recién graduades celebrando.

https://www.pexels.com/photo/newly-graduated-people-wearing-black-academy-gowns-throwing-hats-up-in-the-air-267885/

Colección CUADERNOS

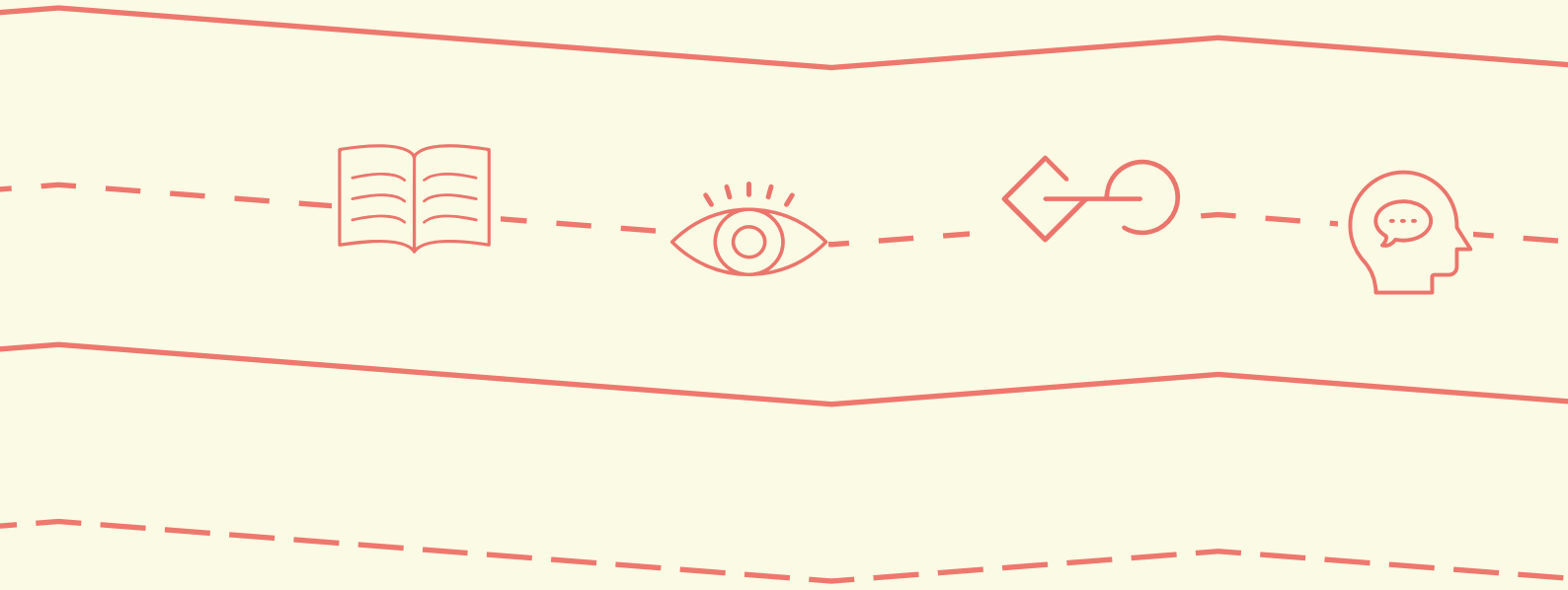
Esta colección tiene como objetivo colaborar en la sistematización de los contenidos generados por docentes y equipos de cátedra de cada una de las Facultades y Escuelas de la Universidad Provincial de Córdoba. La intención es posibilitar la circulación y apropiación de los mismos por todes aquelles que tengan interés en las diferentes áreas de conocimiento y saberes que contiene UPC.

La colección tiene dos series: **Cuadernos de Cátedra** y **Cuadernos Críticos**.

Los ***Cuadernos de Cátedra***, pensados como guía o mapa al recorrido del espacio curricular, con un carácter más instrumental.

Los ***Cuadernos Críticos***, destinados a profundizar y ampliar un campo de conocimiento transversal a varios espacios curriculares, donde se amplían y profundizan estos recorridos en función de las problemáticas y debates actuales.

En ambos casos es manifiesta la pertenencia y articulación entre espacios curriculares de cada una de las Facultades y unidades académicas de la Universidad Provincial de Córdoba, donde se hace explícita la identidad de UPC como un espacio plural para la construcción de conocimiento y cruce de saberes.



Colección Cuadernos

editorial universitaria

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