

“Hello, my name is Coronavirus”: Popularizing COVID-19 for children and teenagers

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ABSTRACT

The aim of this paper is to examine the popularization strategies adopted in texts destined for children and teenagers which deal with COVID-19. It is well documented that the age and the cognitive profile of the target reader have a strong bearing on the structure and nature of a text (Bruti this volume) and that popularization strategies are adjusted in different ways (Turnbull 2015). As Kolucki and Lemish (2011) emphasize, there is a need for communication with children in a way that is age-appropriate and suitable to their needs and interests. Following this research strand, in this paper we analyze the popularization strategies associated with the explanation of coronavirus in relation to the age of the addressee. To this purpose we focus on English booklets and websites dealing with COVID-19 which address two different age groups, children and teenagers. Attention is paid to examples that highlight popularization strategies on the basis of their verbal and visual elements. The basic methodological framework of this study is discourse analysis, with reliance on notions taken from multimodality (Bateman 2014; Kress – van Leeuwen 2020). This provides instruments suitable for identifying cases where the visual mode interacts with the verbal mode to support popularization strategies.

Keywords: popularization strategies, children, teenagers, COVID-19, booklets, websites, multimodality.

¹ The research for this study was conducted by both authors. Sections 1, 2.1, and 3.1 were written by Giuliana Diani. Sections 2.2, 3.2, and 4 were written by Olga Denti. Section 2.3 was written by both authors.

1. Introduction

The Coronavirus Disease 2019 (COVID-19) pandemic has created strange and difficult living conditions for people around the world. As Mitchell observes (2020: 1023), children find it harder than adults to adapt their behaviour and accommodate the various restrictions that are imposed on everyday life due to COVID-19. However, Marina Joubert (2020) points out that, given the right information, children can be powerful agents of change in their families and communities. Similarly, Ghia et al. (2020) stress the importance of clear, accessible, and reliable key information for children so that they can better understand their role in an ever-changing environment, engage fully in the fight against the COVID-19 pandemic, and be empowered with knowledge to prevent unnecessary anxiety and an unsafe careless attitude toward danger. Their claim also reinforces Kolucki and Lemish's (2011: 3-4) view stated in their UNICEF guide for communicating with children when they emphasize the need to communicate with children in a way that is age-appropriate and suitable to their needs and interests. Kolucki and Lemish identify four rules and guidelines for written communication with them. Principle 1 entails appropriate and child-friendly communication in terms of language, characters, stories, music and humour, positive interaction and critical thinking, as well as a careful and smart usage of "special effects". Principle 2 requires a complete, integrated approach to the child, showing parents examples of positive relationships with their children and "safe havens". According to Principle 3, "communication for children should be positive", grounded on strengths such as self-confidence, competence, reference to positive models and to children as active citizens implementing social justice. Principle 4, on the other hand, addresses the needs of all children around the world, their dignity, inclusiveness, diversity, the rejection of stereotypes, and the protection and support of local cultures and traditions. They also highlight children's universal right "to be heard and to be taken seriously; to free speech and to information; to maintain privacy; to develop cultural identity; and to be proud of one's heritage and beliefs. [...] (to) support their holistic development or problem-solving skills" (Kolucki – Lemish 2011: 3-4).

Over the last two years, some researchers have devoted their attention to digital resources to explain COVID-19 to children. Azak et al. (2022), for example, examined the videos on YouTube as a source of information for children regarding COVID-19 in terms of content, quality and reliability.

Keys (2021) analyzed the strategies used to inform children about COVID-19 in an exclusive hour-long TV special called #KidsTogether, launched by Nickelodeon, a US leader in children's entertainment. Other research has focused on the contribution of educational resources to popularizing health knowledge for young people. Van der Sluis et al. (2011), for example, investigated visual exploration of health information for children, by using a cross-media search interface in which textual data is searched through visual images. Turnbull (2015) looked at medical informative discourse on the Internet, by paying attention to the communication strategies used for different age groups: children and teenagers. Diani (2020) explored the multimodal resources for popularizing health knowledge on websites for children.

This paper contributes to this research direction by exploring the interaction of language and images in print and in digital texts dealing with COVID-19 and targeting young people. To this purpose we focus on English booklets and websites which address two different age groups, children and teenagers. Attention is paid to examples that highlight popularization strategies on the basis of their verbal and visual elements. As the booklets and the websites under investigation address different age groups, the theme of COVID-19 is treated in different ways, both in terms of content and language. More specifically, the study addresses the following research questions:

1. Which popularization strategies are used in booklets and websites in relation to the age of the addressee?
2. How do the verbal and the visual interact (i.e., what is told in words and/or in images) in order to support popularization?

The next section provides a short description of the materials used for the study as well as the methodology adopted. Section 3 presents the results of the analysis. The paper concludes with a summary of the findings (Section 4).

2. Corpus and methodology

The present study is based on the analysis of three booklets and three websites addressing children and teenagers. Table 1 illustrates the corpora and their main features.

Table 1. The Corpora

Source	Main features	Target age of audience	Size/N. of articles	Type of texts
<i>Hello, my name is Coronavirus</i> (2020) downloaded from the <i>Home Learning Hub</i> web page of the <i>Safer Schools</i> website developed in the UK https://oursaferschools.co.uk/home-learning-hub/	Picture book	3 to 5-year-olds	15 double-page spreads	Narrative
<i>Coronavirus and Covid. A book for children about the pandemic</i> (Second edition 2021) by Elizabeth Jenner, Kate Wilson and Nia Roberts. British publisher Nosy Crow https://nosycrow.com/wp-content/uploads/2020/04/Coronavirus-A-Book-for-Children.pdf	eleven thematic sections whose titles are in the form of <i>wh-</i> and <i>how-</i> questions	7 to 11-year-olds	32 pages	Descriptive Expository
<i>COVID-19. What is it? How can we stay safe and work together to beat it?</i> (2020) downloaded from the Scotland Glow Blogs website: https://blogs.glowscotland.org.uk/sa/public/allowaysandeyc/uploads/sites/10359/2020/06/05195354/What-is-Covid-191.pdf	an introduction followed by eight thematic sections whose titles are in the form of <i>wh-</i> and <i>how-</i> questions; a final section entitled "Hands up"	12 to 17-year-olds	15 pages	Descriptive Expository

<p>NEWS FOR KIDS.net https://newsforkids.net (January 12, 2020-February 2022)</p>	<p>Specific section on Covid-19:</p> <ul style="list-style-type: none"> • Overview of COVID-19; • Coverage of COVID-19; • Newest COVID-19 Updates; • Detailed info by country; • Coronavirus Words 	<p>Different age ranges are considered: 8 & up 10 & up 12 & up Young Adult</p>	<p>Total 93 pages + 195 4-line long information cards List of 16 words + search puzzle on the list</p>	<p>Descriptive Narrative Instructive Expository Argumentative They range from news articles <i>tout court</i> to pure expository or instructive sections/ paragraphs</p>
<p>CBC KIDS NEWS https://www.cbc.ca/kidsnews/ (February 13, 2020-February 2022)</p>	<p>A section of CBC.CA HOT TOPICS: COVID-19</p>	<p>Grade 10 to 12 (15 to 17-year-olds)</p>	<p>366 articles of which 96 with videos</p>	<p>Descriptive Narrative Instructive Expository Argumentative Being mainly news articles, all types alternate</p>
<p>KIDSNEWS https://www.kidsnews.com.au (February 2, 2020-February 2022)</p>	<ul style="list-style-type: none"> • “<i>Healthy Harold</i>’s tips for staying healthy and happy during Covid”; • COVID-19 in the search button 	<p>Grade 3 to 8 (8 to 14-year-olds) <i>Healthy Harold</i> section may address younger children</p>	<p>1 article with <i>Healthy Harold</i> 210 articles</p>	<p>Descriptive Narrative Instructive Expository Argumentative <i>Healthy Harold</i>’s style is more similar to the booklets’ one</p>

2.1 The English booklets

The booklets chosen for the present study are: *Hello, my name is Coronavirus*; *Coronavirus. A book for children*; and *COVID-19. What is it? How can we stay safe and work together to beat it?* (see Table 1).

Hello, my name is Coronavirus (2020) is a picture book in the form of a story narrated by a human-like virus. It contains fifteen double page spreads with colourful illustrations. It was downloaded from the *Home Learning Hub*, a web page of the *Safer Schools* website developed in the UK. The *Home Learning Hub* provides classroom-based resources for primary and secondary-school children. The picture book was taken from the primary-school resources (age 5-11) devoted to COVID-19. As stated in the web page, these resources were developed during lockdown to help children learn more about the Coronavirus.

Coronavirus. A book for children was first written in July 2020, with input from consultant Professor Graham Medley of the London School of Hygiene & Tropical Medicine, and advice from three head teachers and a child psychologist. The book illustrator is Axel Scheffler, who has illustrated popular books for children in the UK, such as *The Gruffalo*. A second, revised and updated version was published in April 2021, entitled *Coronavirus and Covid. A book for children about the pandemic*. The present study is based on this edition: it is divided into eleven thematic sections whose titles are in the form of *wh*-questions. Each question is answered over two or three pages and is supported by masterfully created illustrations depicting general situations which young readers can identify with. Each section can also be read independently from the other sections. The young reader may choose what to focus on, helped by the pictures and the title-question of the section.

COVID-19. What is it? How can we stay safe and work together to beat it? is a booklet in the form of a PowerPoint presentation, downloaded from the Scotland Glow Blogs website. It is divided into eight sections, an introduction and a final section entitled "Hands up", for a total of 15 slides/pages. Each section has a title in the form of a question with the answer following on the same page or over several pages. The booklet uses a long informational text on each page, and specific information is contained in either boxes or circles. In the case of the circles, an image relates to and reinforces the message superimposed. Yellow is used as the colour background for titles. Hans, a personalized character pictured through the image of a hand on each page, becomes orange when expressing a negative effect of COVID. Some visual elements describe general situations which teenagers can identify with (i.e., a young boy coughing).

2.2 The websites

The websites chosen for the present study are: *CBC Kids News*; *KidsNews*; and *NewsForKids.net* (see Table 1).

CBC Kids News is a subsection of the English-language online newspaper of the Canadian Broadcasting Corporation (CBC.ca). It addresses Canadian children and teenagers: "We aim to cover the topics that kids care about. We aren't your parents' news. We aren't a teacher site. We are real news, for real kids. Created for and with... kids.", "Kids in Canada" (<https://www.cbc.ca/kidsnews/about#article-start>). The *COVID-19* section was selected in the *HOT TOPICS* drop-down menu. The most striking aspect of this website is the relationship of social closeness and peer sharing between the addresser and the addressee, built both visually and verbally around five teenagers (Abigail, Elijah, Saara, Arjum and Alexia), thus enhancing the relevance and reliability of the information for their readers (Sperber – Wilson 2002; Wilson 2003; Piotti 2006).

KidsNews employs various kinds of representations to address younger readers and their teachers: "Kids News is a free, news-based literacy tool for classrooms. (...)". The content is adapted to child language and cleared of inappropriate information and images. One of the most important aspects of this website is the reference to *Reading Levels*: a traffic-light colour system (green, orange and red) indicates the difficulty of the article and helps children choose the right news; it is based on vocabulary level (simple, medium, complex), the story content comprehensibility, and the need for an audio, video, glossary or "teacher scaffolding" (https://www.KidsNews.com.au/about-us#kids_news_contact). For younger children, communication is mediated through *Healthy Harold*, a giraffe cartoon that gives "health and safety advice". The pages on *COVID-19* were selected by seeking *COVID-19* through the search button.

NewsForKids.net has the most formal appearance of the three websites. In the centre of the page, the logo of the website shows the globe with the land in green against a background of white oceans. This is a visual metaphor suggesting the website's global breadth, verbally confirmed by the presence of a *World* category in the main menu (Africa, Asia, Australasia, Europe, North America, South America). Underneath, the slogan "Real News, Told Simply.™" expresses the website mission. The articles can be selected as "all articles, Young Adult, 12 & up, 10 & up, 8 & up". The sections on *COVID-19* address the entire world audience, as well as all age groups. This website is the only one with a specific section on *Coronavirus*, present in the left column in all pages, and divided into four sections: *Overview of COVID-19*, *Coverage*

of COVID-19, *Newest COVID-19 Updates*, and *Coronavirus Words*. The stories are chosen on the basis of their particular interest and appropriateness for children.

2.3 Methodology

The basic methodological framework of this study is discourse analysis. To identify popularization strategies, we refer to existing studies on the discursive practices which, in literature on popularization, are identified as being used to facilitate a layman's access to specialized scientific knowledge. More specifically, we used Calsamiglia and van Dijk's (2004: 372-384) classification of the following five forms of explanation. The first is *denomination* or *designation*, which consists in introducing new terms and indicating their specialized denominations. Closely linked to denomination is *definition*, which involves the explanation of unknown terms by means of a brief description of general and specific properties of the referent. Another procedure is *reformulation* or *paraphrase*, marked by appositions, parentheses, dashes, quotes and metalinguistic expressions (e.g., "are called"). A fourth procedure is *generalization*, which draws general conclusions from specific examples or cases. The last category is *exemplification* which provides specific examples of general phenomena.

The analysis also focuses on the use of some engagement markers, in particular *you* and questions, as resources that are used by writers to explicitly address the readers and engage them in the dialogue (Hyland 2005).

All the discursive practices described above work on the lexical and syntactic levels. There are other practices which, on the contrary, work on a cognitive one. They are classified under the label "analogy" or "association" (Calsamiglia – van Dijk 2004: 376), and include linguistic similes and metaphors. In Lakoff and Johnson's (1980: 5) words, "the essence of metaphor is understanding and experiencing one kind of thing in terms of another". The 'other' element is usually cognitively familiar to the reader, being part of his/her background knowledge. A simile, on the other hand, is a type of metaphor which is easily identifiable as it is accompanied by specific indicators such as *like*, *as*, *similar to* or *the same as*.

Considering that the booklets and the websites under investigation contain illustrations, photos and videos, particular attention was paid to the verbal-visual interplay. As regards the analysis of the visual mode, the framework we adopted is based on the grammar of visual design proposed by Kress and van Leeuwen (2020), which concerns the functional semiotic accounts of the meaning-making resources of photos and illustrations.

These were analyzed in terms of the meanings constructed in them, based on Halliday's (1970: 143) three metafunctions of language: ideational, interpersonal, textual. According to their approach, in a multimodal text, ideational or representational meaning, as they call it, refers to "the way images represent the relations between the people, places and things they depict, and the complex set of relations that can exist between images and their viewers" (Kress – van Leeuwen 2020: 179). Interpersonal meaning refers to the verbal and visual choices representing a particular social relation between the producer, the viewer and the object represented (Kress – van Leeuwen 2020). Compositional or textual meaning refers to the way the visual elements "are integrated into a meaningful whole" (Kress – van Leeuwen 2020: 179). The dimension of ideational meaning addresses the notion of visual metaphor that contributes to text-image relations. The notion of visual metaphor adopted here derives from Forceville (1996), who claims that a metaphor consists of a "target" (a topic) and of a "source" to which the target is metaphorically compared. A visual metaphor, as he calls it, is conveyed when both target and source are cued in the visual mode.

To further investigate the relation between text and images, we refer to Barthes (1977), Nöth (1995), Schriver (1997), Marsh and White (2003); van Leeuwen (2006, 2008), Bateman (2014), and Francesconi (2018). In particular, Barthes defines the *anchorage* function, when the text fixes the polysemous meaning of the image, controlling and amplifying it, and the *illustrative* function of the image, providing illustration to the text, reducing its meaning. When the relationship between text and image is equal, they combine and complement each other through the *relay* function (Barthes 1977: 41). Of Nöth's (1995: 454) five image-text relations (*illustration*, *pictorial exemplification*, *labelling*, *mutual determination* and *contradiction*), the first three predominantly characterize the websites. While in *illustration*, the picture has a secondary semiotic role with reference to the text, in *pictorial exemplification* the visual elements add information and offer an example of the verbal component, explaining its meaning. By means of *labelling*, a text identifies an image: e.g., the caption or name under an unknown face provides the person with an identity. The titles or captions of well-known people, places or objects normally hold an anchorage function (see also Bateman 2014: 43-44). Another approach applied to the analysis of the corpora was Schriver's (1997: 343) *rhetorical clusters* that help identify the layout structures and their meaning. For graphic analysis, we rely on the notion of *close relationship* (Marsh – White 2003), where the image function is to reiterate, organize, relate, condense, and explain by exemplifying and describing the text. Francesconi's (2018: 65) approach to videos was also

applied to analyze the websites. Videos involve moving images, colour saturation, brightness and illumination, contrast, hue, depth, details, representation, as well as sound perspective, time, rhythm, interaction of voices, melody, voice quality, timbre and modality.

The analysis of the images and of the layout also entailed the choice of colour. Following Cyr, Head and Larios (2010) and Gaines and Curry (2011), colours influence children's perceptions, emotions and psychological responses. They arouse appeal, trust and satisfaction; they influence aesthetics, feelings, harmony, appropriateness, and function in any culture throughout the world. In general, bright colours stimulate children's attention. Green relaxes and influences speech skills; orange has a refreshing and stimulating effect on children's brains; pink is positive and calming. Brown, black and grey are related to negative emotions.

3. Data analysis

3.1 The English booklets

This section analyzes the three booklets, focusing on selected examples that highlight popularization strategies on the basis of the verbal and visual elements characterizing them.

3.1.1 Popularization strategies

Starting with the verbal features, *Coronavirus. A book for children* and *COVID-19* show similarities when introducing children and teenagers to the concept of Coronavirus and COVID-19. These two terms are introduced through their denomination and followed by a definition, as illustrated in the following examples.²

- (1) What is Coronavirus?
Coronavirus is a kind of virus. Viruses are tiny germs that are so small that you can't see them. (Coronavirus. A book for children)
- (2) What is COVID-19?
COVID-19 is the name of a disease which is causing a lot of problems around the world. (COVID-19)

² In all examples italics are added for emphasis.

On the other hand, the picture book *Hello, my name is Coronavirus* does not provide a definition of Coronavirus. A colourful humanized smiling virus greets children directly, "Hello, my name is Coronavirus" to appeal to the very young. The book translates the Coronavirus into a story, revolving around the virus itself through its personalization.

Another level of similarity between *Coronavirus. A book for children* and *COVID-19* is a common pattern on which both booklets are built: the question/answer format. Children and teenagers are introduced to the topics of the book through *wh*- and *how*-questions used in each title section, with the answer following on the same page or over several pages. Out of eleven title sections in *Coronavirus. A book for children*, nine are in the form of a *wh*-question:

- What is the coronavirus?
- What happens if you catch Covid?
- So why are people worried about catching the coronavirus?
- Now we have a vaccine, what happens next?
- Why are we spending more time at home?
- What's it like to be at home more of the time?
- What can I do to help?
- What else can I do?
- What's going to happen next

Two title sections use *how*-questions:

- How do you catch the coronavirus?
- How can doctors, nurses and scientists help people with Covid?

On the other hand, in the eight title sections of *COVID-19* the tendency is to use *how*-questions to explain how the virus works:

- How does the virus get into the human body?
- How does the virus affect people?
- How can we stay safe and work together to beat COVID-19?
- How will we beat COVID-19?
- How can we help?
- How can we all help?

Only two titles are in the form of *wh*-questions:

- What is coronavirus?
- What have we learnt about COVID-19?

A possible explanation for the prevalence of *what*-questions in *Coronavirus. A book for children* is that they are the most appropriate to the target age

group the book addresses (7-11). Children learn starting with more concrete questions about their immediate environment, and *what* is the easiest question to be mastered, followed by questions such as *why*, *how* which are harder to formulate and understand. For the same reason the *COVID-19* booklet resorts to *how*-questions, typical of teenagers. By using these types of questions, the writers also try to draw the young readers' attention to the issue and arouse their interest and curiosity.

In four title sections of *Coronavirus. A book for children* there are also questions directly addressing young readers through the use of second-person *you*:

- How do you catch the coronavirus?
- What happens if you catch the coronavirus?

or involving them individually through the pronoun *I*, implying their desire to help:

- What can I do to help?
- What else can I do?

There are also questions using inclusive *we*; this form helps the young reader to identify with the speaker and creates a rhetorical effect of closeness and involvement. This is a recurrent strategy in *COVID-19*, observable in five out of eight title sections:

What have we learnt about COVID-19?

- How can we stay safe and work together to beat COVID-19?
- How will we beat COVID-19?
- How can we help?
- How can we all help?

One instance is also found in *Coronavirus. A book for children*: "Why are we spending more time at home?".

What the three booklets under investigation have in common is a direct appeal to the young reader through the pronoun *you*. This is a strategy aimed at engaging the reader in the text and drawing him/her into the discourse (Hyland 2005; Giannoni 2008). Here are some examples:

- (3) Coronavirus germs live in people's throats and mouths. When someone who has coronavirus coughs or sneezes or breathes out, the germs come out of their nose and mouth in tiny drops of water. Though *you* can't see the germs, *you* can sometimes see these tiny drops. In cold weather, they make a cloud of steam! So if someone else accidentally breathes in the air with coronavirus germs in it, they

would probably get the illness. The closer *you* are to someone the easier it is for *you* to breathe in these tiny drops. (*Coronavirus. A book for children*)

- (4) Even if *you* used a microscope, *you* wouldn't be able to see me! (*Hello, my name is Coronavirus*)

Interestingly, *you* is mostly used to give children and teenagers a sense of awareness of what they can do to help make everyone safer, as the following examples illustrate:

- (5) *You* are already helping a lot by following the government's rules. But *you* can also help by taking extra care to make sure *you* don't catch or pass on coronavirus to anybody else. [...] So if *you* wash your hands really carefully and for long enough, *you* won't have any coronavirus germs on your hands. [...] If *you* have to cough or sneeze, do it into the inside corner of your elbow, not on to your hand. Then *you* can't give coronavirus to other people that way. (*Coronavirus. A book for children*)
- (6) To help make everyone safer, make sure that *you*... 1. Wash your hands with soap and water often and for at least 20 seconds. 2. Cover your mouth and nose with a tissue or your sleeve when *you* sneeze or cough. (*Hello, my name is Coronavirus*)
- (7) If *you* must go out, stay more than two metres away from people who *you* do not live with. [...] Don't use public transport unless it is essential that *you* do. Do not get together with people who do not live with *you* in public spaces such as parks or on the street. Do not meet up with friends or family who *you* do not live with. Use the phone to contact people who help *you* stay safe and well, such as doctors. (*COVID-19*)

However, *you* is also employed to caution the child about what he or she can do if staying at home from school, as shown below:

- (8) If *you* are not at school all the time right now, do your school work. It will help to keep your mind busy, so *you* won't be bored. And then, when *you* do go to school, *you* will have learned a lot! (*Coronavirus. A book for children*)

Let us now move on to consider the way the verbal and the visual interact in order to support popularization.

3.1.2 Verbal-visual interplay

As regards the verbal-visual interplay, the three booklets show differences in the way descriptions and images are associated with COVID-19. In *Coronavirus. A book for children* emphasis is on the invisibility of the virus, and there is a lack of virus images, thus highlighting it as invisible to the human eye, as the following extract shows:

- (9) If the person with the coronavirus on their hands uses a door, the invisible germs can stay on the handle for hours. When someone else opens the door, they get the germs on their hands too. (*Coronavirus. A book for children*)

The description is combined with an image of a young boy asking himself “Hmm, I wonder if there are germs on this door handle”, emphasizing the invisibility of the virus. As Stenglin and Djonov (2010) observe, fictional characters, typically children, speak and think, guiding the child-user in learning. The fact that in the image a child boy asks himself the question makes knowledge transmission more immediate.

Alternatively, the book visually represents COVID-19 as an illness by depicting typical familiar situations, like people sneezing, or suggested actions for protection against it (i.e., a boy covering his mouth with a tissue when sneezing; a girl and a boy washing their hands). These are examples of how an image supports the popularization strategy: by linking the concept of illness with an everyday situation, the image enables children to perceive it as part of their reality. While showing children the correct behaviour, the book does not deny uncertainties and negative consequences. This is well exemplified in the section entitled “What is it like to be at home all the time?”, where illustrations help to convey such negative aspects, i.e., children get bored or angry, or, where even doctors say they ‘hope’ that the medicine works.

Unlike *Coronavirus. A book for children* where the virus is not represented visually, in *COVID-19* and *Hello, my name is Coronavirus*, the virus is depicted in different ways appropriate to their different target age groups, teenagers and very young children respectively. In *COVID-19*, the popular image of the coronavirus’ spiky ball is used as a background picture on each page. In *Hello, my name is Coronavirus*, instead, the virus is humanized by means of a smiley face who tells its story. The image on the front cover of the book depicts the virus as a friendly small creature with a human-like facial expression, saying “Hello my name is Coronavirus”. The smallness vs. invisibility of the virus

is described verbally through the phrase "Even if you used a microscope, you wouldn't be able to see me!!" and the words "There are lots and lots of copies of me – Tehe... you can't see me!" within bubbles, both uttered by the virus. This description is accompanied by a big, stylized picture of a microscope. The smallness of the virus is also reflected by the font size: "I'M REALLY, really small!" (original emphasis): the first three words "I'm really" are in a very large bold font while "really small" becomes tiny to reinforce the concept of smallness. This is also emphasized by underlining and an exclamation mark. In this example the verbal and the visual interact to make knowledge transmission more immediate for the young reader.

The picture book also introduces the young reader to the concept of virus circulation that is explained as "living all over the world". The words uttered by the virus "Viruses like me are all over the world" are exemplified in the visual component by viruses with human-like facial expressions floating in the universe above the globe. The sentence thus combines with the image to instantiate a visual metaphor: the meaning of "living all over the world" in the verbal mode is reflected in the visual modality in a metaphorical way through the use of the globe. The illustration exemplifies an interesting use of an image-supported popularization strategy: the visual metaphor contributes to exemplifying the spread of COVID-19 around the world, and to facilitating the correct interpretation of the image for the young reader.

The virus' storytelling then moves on to depict virus transmission as a form of travelling. It says "I really like travelling". Here again, another visual metaphor can be identified. The illustration reflects the virus spreading, resulting in the visual component with the image of the virus flying on a plane in a blue sky, wearing sunglasses and appearing happy. This friendly image avoids frightening children. The story proceeds with the description of the spread of the virus, which is realized verbally through the words uttered by the virus "I jump from person to person through... coughs, sneezes and touch". These words are supported by an image of a little girl coughing, sneezing and spreading viruses to a little boy. In the following double spread page, the effects of COVID-19 are described verbally, as shown in (10), and are visually represented by an image of a sad-faced boy with a thermometer in his mouth saying through a bubble "I don't feel so well".

- (10) Unfortunately, when I come to visit, **I might bring a...** high temperature and a stubborn cough" (original emphasis). (*Hello, my name is Coronavirus*)

The child's discomfort is reinforced by the image of a crying face emoticon and that of the virus itself crying, saying "None of these things are very nice and can make **SOME people very sick!**" (original emphasis). The use of bold to emphasize the importance of the message is worth noting. Although the illustration and the text may bring out children's anxiety, in the following double spread page, the words uttered by the virus "But, I don't hang around for long and almost everyone gets better" intend to reassure the young reader. However, this cannot be fully understood without the picture. Here again, another visual metaphor can be identified. The illustration reflects happiness in the visual component through an image of a smiling child celebrating with streamers and confetti and raising his arms up in the air.

Interestingly, separated from the story, the picture book is accompanied by a six-page section that encourages the active participation of the young reader to stay safe and cautions him/her about what he or she can do. This is realized through a list of recommendations supported by colourful images of children:

- (11) 1. Wash your hands with soap and water often and for at least 20 seconds; 2. Cover your mouth and nose with a tissue or your sleeve when you sneeze or cough; 3. Try to avoid touching your eyes, mouth and face; 4. For now, don't touch other people. No handshakes, hugs or high 5s. (*Hello, my name is Coronavirus*)

When listing advice, the book still refers to the virus in a personalized way, as exemplified by the following extract:

- (12) If I come to visit your home, you'll be asked to **stay at home for a while** with your family so that you **don't pass me onto others**. You can use this time at home to: keep up with schoolwork; play with your toys and games; keep in touch with your family and friends on video calls. (original emphasis) (*Hello, my name is Coronavirus*)

Although the sentence "stay at home for a while" may instil anxiety in children, the illustration (a smiling boy) and a list of positive things to do ("play with your toys and games; keep in touch with your family and friends on video calls") contribute to an experience packed with positivity. Similarly, the last page of the book offers the young reader the reassuring message that "If you follow this advice, I'll visit less people". This is exemplified visually by a big virus emoticon in tears saying "Bye!" (in pink capital letters, in a very large bold font with exclamation mark) to a smiling child with streamers and

confetti in the background. All this derives from the importance of the visual elements for very young children who cannot yet read.

A final positive message is also delivered in *Coronavirus. A book for children* as it ends by reassuring the young reader that "One day, this strange time will be over". This is exemplified metaphorically through an image of children running out of a house and throwing their hands in the air as a sign of joy while one child is saying "Now we can hug each other!".

Moving on to consider the booklet *COVID-19*, the term "COVID-19" in the title – rendered in white and in a capitalized large bold font – is followed by a subtitle that zooms in on the main topic of the book: "What is it? How can we stay safe and work together to beat it?". The title is accompanied by a picture: a big yellow humanized hand with a smiley face and the planet Earth in an outer space background. This represents an interesting relationship between words and images. The visual representation of planet Earth gives the idea that the COVID-19 disease has struck on a worldwide scale. Like *Hello, my name is Coronavirus*, the book initiates teenagers into COVID-19 through a personalized character, Hans, saying: "Hello, my name is Hans. I would love to shake your hand, give you a high five or a fist bump but right now we can't do that. Have a read of this handy guide I have put together to help you understand why life is different for us all at the moment". Hans is hand – a wordplay – depicted throughout the book as a big yellow humanized hand.

Unlike the other two booklets, this text is in the form of a PowerPoint presentation. Each page/slide consists of one or two paragraphs and a framed box with specific information, accompanied by the yellow humanized hand image that changes colour to orange and facial expressions when expressing the negative effects of COVID-19. Similarly, it devotes some pages to describing how to stay safe. Advice is given in the imperative form and written in circles with pictures in the background reinforcing the situation being described. It is worth noting the type of advice and language that is appropriate to the target age group the book addresses (teenagers), as the following extract shows:

- (13) Stay at home; Only leave your home to buy food, get medicine and to exercise once a day; If you must go out, stay more than two metres away from people who you do not live with. (*COVID-19*)

The book concludes with a section titled "Hands up" offering a typical instruction as if in the classroom, requiring a plural response:

- (14) Who is ready to work together to beat COVID-19?! Remember, if you have any worries or questions about COVID-19, talking to an adult you trust is a great place to start. (COVID-19)

Some final words on the language and typography used in the booklets: the language is mainly informal in *Coronavirus. A book for children* and *Hello, my name is Coronavirus*, as testified by the use of contracted forms (“I’m sure you’ve heard”; “you can’t”; “scientists don’t know”), discourse markers such as “so” in initial position (“So let me introduce myself with some facts!”; “So you can also catch coronavirus by touching things that someone with the virus has already touched”) or “well”, used in answers as if they were turns in a conversation (“Well, the answer is millions and millions”), and exclamation marks. On the contrary, *COVID-19* employs language associated with a more formal style, i.e., full forms rather than contracted forms (“Children do not appear to get very ill”; “Do not share things”). The explanatory sections of the book are written in the style of a school textbook, being more informational than colourful.

As regards typography, the booklets use capital letters and bold font consistently. This makes the text not only visible but also meaningful (Gutjahr – Benton 2001), having an evident multimodal interpersonal meaning. As van Leeuwen (2006: 154) points out, “typography can be seen as a semiotic mode – systematic, multimodal and able to realize not just textual, but also ideational and interpersonal meaning”. This view is well exemplified in the picture book *Hello, my name is Coronavirus* by the use of the typeface and even size that triggers and illustrates emotional reactions to the character within the narrative.

3.2 The websites

3.2.1 Popularization strategies

This section analyzes popularization strategies and the interpersonal metafunction in the websites. The material on COVID-19 is mainly conveyed as news articles, which fulfil the functions of informing, narrating and persuading. However, they address children, and thus must be adapted, reformulated and recontextualized to their knowledge, also by using non-verbal strategies that ease the process of reading and learning. Following Diani and Sezzi (2020: 274), “As defined by Djonov (2008: 217), websites expressly designed for children are ‘edutainment or infotainment texts as they aim to both educate or inform and entertain their overt audience – children’”.

The texts have a news-like structure (van Leeuwen 2008: 350): a *lead* – i.e., a short summary of the issue, sometimes in the form of images and captions; an *orientation* – i.e., the place, the time, the people involved and the starting event; a *complication* – i.e., the intertwined events; an *evaluation* – i.e., the use of illocutionary expressions which underline the relevance and interest of the story; a *resolution* – i.e., the story's outcome; a *coda* – i.e., possible future developments. This structure helps provide children with a clear organization of information, which relies on images and texts, very close to each other in the layout, equally complementing the meaning.

Looking closely at the verbal features of the texts on the websites, the first popularization strategy found is the denomination of the virus, more frequently accompanied by its definition, either in the text, in pop-up windows or with a hyperlink. This enables the young readers to immediately understand the meaning of the word and of the whole paragraph. In *CBC Kids News*, for example, the virus is introduced through a sentence accompanied by a colourful box identifying the acronym COVID-19 (CO from Corona, VI from virus, D from disease and 19 from 2019):

- (15) Because there are different types of coronavirus, on Feb. 11, the World Health Organization (WHO) announced the official name of the respiratory disease caused by the coronavirus would be COVID-19. (<https://www.cbc.ca/KidsNews/post/ive-just-been-evacuated-from-wuhan-teen-from-china-on-why-hes-in-canada/>)

The same strategies are found in the other two websites. In *NewsForKids.net*,

- (16) COVID-19 is the name given to a new coronavirus disease that began in Wuhan, China in December, 2019. Though the illness is similar to a cold for most people, in some cases it can cause death. [...] "COVI" stands for "coronavirus", "D" is for "disease", and the "19" represents the year the virus appeared. Since COVID-19 first appeared, the disease has spread all through China and to many other countries around the world. [...] Coronaviruses are *viruses* that have a spiky ring around them like a crown when viewed with a powerful microscope. (<https://NewsForKids.net/fastfacts/coronavirus/>, original emphasis)

This denomination/definition uses a simile to make the concept more intelligible for children, by matching it with a more familiar and better known one. The negative aspects of death and of the global spread are highlighted several times here, to explain its gravity. The word *viruses* is highlighted in

yellow and has a pop-up window with its definition: “Viruses are tiny germs that can cause diseases”, which emphasizes their minuteness.

KidsNews introduces the COVID-19 topic emphasizing it with a title, repeated in the first sentence of the article, followed by its designation and some further explanations:

- (17) The World Health Organization has officially named the coronavirus COVID-19.
- (18) The “co” stands for “corona”, “vi” for “virus” and “d” for “disease”, while “19” was for the year, as the outbreak was first identified on December 31.
- (19) [...] the name had been chosen to avoid references to a specific geographical location, animal species or group of people in line with international recommendations for naming aimed at preventing stigmatization. (<https://www.KidsNews.com.au/health/working-to-protect-australians-during-global-coronavirus-outbreak/news-story/902750caelf5048c2b7cf3b69698ace>)

The whole article, as well as all other articles in this website, is dotted with asterisks referring to a glossary, to enable children to familiarize with the new words found. The definitions are expressed by short and clear elliptical sentences. Another extremely valuable section of this article is the use of drawings of the human body and contrasting colours (grey, red and black for words) to explain the symptoms, whose names are linked through lines to the organ involved. “Reduce your risk” introduces a section characterized by icons symbolizing the instructive clauses next to them:

- (20) Clean hands with soap and water or alcohol-based hand rub.

The icon shows two hands rubbing together and some drops. This section is thus more instructive than descriptive, with a positive and reassuring tone for the children.

The presence of imperatives is another feature of the websites under investigation, either to give instructions, as in (21), or as an exhortative verb, directly involving the young reader, as shown in (22):

- (21) To keep diseases like COVID-19 and the flu from spreading:
- Stay home if you’re sick
 - Wear a mask when you go out (etc.). (<https://NewsForKids.net/fastfacts/coronavirus/>)

- (22) Imagine having just a few hours to pack up your things and run away to a place you've never been. (<https://www.cbc.ca/KidsNews/post/ive-just-been-evacuated-from-wuhan-teen-from-china-on-why-hes-in-canada/>)

Sometimes quotations are employed, for example from interviews, with the addition of words in brackets when necessary to complete the sentence meaning. This makes the text more personal and intimate with the reader, explaining concepts such as the virus, isolation, quarantine, etc., in a more engaging way:

- (23) "I have to admit, I've been a little bit scared of [the coronavirus]," Wyatt said. "I've been scared that I might catch the disease. (<https://www.KidsNews.com.au/health/working-to-protect-australians-during-global-coronavirus-outbreak/news-story/902750caae1f5048c2b7cf3b69698ace>)
- (24) In December, Mr. Johnson said in Parliament that "...there was no party and that no Covid rules were broken". (<https://NewsForKids.net/articles/2022/01/14/news-roundup-pressure-on-johnson-georgia-wins-small-fries/>)

In (22), the quotation from the WHO chief confers authority to what is being said, while (24) reports Johnson's statement in Parliament, unveiling his lies on breaking the coronavirus rules while going to a party.

Similar to the booklets, the question/answer format, often in an elliptical form, as in (25), is a widely used pattern, especially in *CBC Kids News* and in *KidsNews*, less frequently in *NewsForKids.net*.

- (25) Want to know more about what's true and what isn't true when it comes to the coronavirus? Check out this video. (<https://www.cbc.ca/KidsNews/post/ive-just-been-evacuated-from-wuhan-teen-from-china-on-why-hes-in-canada/>)

Example (26), on the other hand, shows how useful the *how-* or *wh-*interrogative forms may be in building colloquialism and in catching children's attention, as mentioned in Section 3.1.1. Here, both the headline and the paragraph titles are arranged in the form of questions:

- (26) How does the coronavirus vaccine work? (...) WHAT IS A VACCINE?
(...) HOW DO VACCINES WORK? (...) HOW DOES THE PFIZER

VACCINE WORK? (...) WHY DOES IT HAVE TO BE KEPT COLD?
 (...) WILL IT PROTECT AGAINST NEW VARIANTS? (<https://www.KidsNews.com.au/explainers/how-does-the-coronavirus-vaccine-work/news-story/941870ebcb9063956589c8647d931493>)

In *KidsNews*, the text is simplified by: *Fast facts lists*, which make it less heavy and more easily readable; contracted forms that make the language less formal and closer to everyday conversation; the additional sections *Suggestion of extra reading*, and *Quick quizzes*, with open questions to check understanding and the possibility to *Listen to this Story*. This is extremely useful for children affected by dyslexia or other learning difficulties, since it makes the information more accessible. Moreover, this site has a special section with the fictional character *Healthy Harold*, a giraffe, addressing 8-12-year-olds, i.e., the age group that Valkenburg and Cantor (2001) define as middle childhood. This age group is able to differentiate between an imaginary and a real domain, and to understand various topics and degrees of difficulty (Cappelli 2016). Younger children could access this information if accompanied by their parents, who can read it with them. Here, the verbal strategies are slightly different compared to those already analyzed for teenagers. Images display either *Healthy Harold* wearing a mask, riding his scooter, or children with a trusted adult, to deal with emotions and doubts. Sometimes stories about Harold are told. The lexis is simpler, more informal, contracted forms are frequent, denomination and definitions are less structured, as shown in (27):

(27) Covid is a word we've been hearing a lot about over the past year. It's meant big changes for many people – kids included!

Covid-19 is virus, which could make a person sick, a bit like when you get a really nasty cold. It gets in people's saliva, snot and breath. It spreads easily when a person sneezes, coughs or breathes too close to other people. (<https://www.KidsNews.com.au/ask-healthy-harold/healthy-harolds-tips-for-staying-healthy-and-happy-during-covid/news-story/8d7fead9435329bf63d68cdbe05d2e5f>)

Once COVID-19 has been identified, recommendations are given through the pronouns *I* or inclusive *we*, or by reporting something that Harold's dad said or that Harold discovered, while the imperative verb form is avoided. This results in a less directive, more personal relationship, as exemplified in (28):

- (28) But there are many things we can do to keep ourselves strong and well. Like getting a good night's sleep and washing our hands. (<https://www.KidsNews.com.au/ask-healthy-harold/healthy-harolds-tips-for-staying-healthy-and-happy-during-covid/news-story/8d7fead9435329bf63d68cdbe05d2e5f>)

The question/answer format is essential, both to explain issues that are COVID-related in a direct way, and to help children, with their worries and "big emotions", to feel "healthy and happy". The language is in a conversational register, enriched with interjections and exclamations: "Wow, great question!". In fact, it is a conversation with turn taking between the children who ask questions, and the giraffe Harold, who provides answers.

3.2.2 Verbal/visual interplay

In *CBC Kids News* the way the verbal and visual elements coexist on the page and are organized in the layout (Bateman 2014) – their fonts, sizes, length, position and colours – is extremely effective. The word "coronavirus" is used for the first time in blue, functioning as a hyperlink. It leads to a page containing subsequent slides with information on the coronavirus: its origin, its definition, its symptoms, its developments and so on. In the first slide the use of a map is extremely helpful to identify China and Wuhan, accompanied by the sentence "A new coronavirus outbreak is in the news. It was first identified in the central Chinese city of Wuhan". The following slide displays the microscope-enlarged image of the coronavirus to show what it looks like, which "creates the illusion of it being closer and therefore more tangible" and real (Diani – Sezzi 2020: 674). The caption claims:

- (29) This is a picture of a coronavirus. It's called that because the virus looks like a corona (crown or halo) under an electron microscope. (<https://www.cbc.ca/KidsNews/post/heres-everything-you-need-to-know-about-the-coronavirus>)

The visual connection involving amplification through size, relevance and repetition (Gaede 1981) enhances the denomination/definition effectiveness. The deictics "this" and "that", followed by the verbs "to be" and "to be called", are frequently used to introduce an explanation or the second part of a definition. Here "that" is used as a pronoun for "coronavirus". "Called" is a metalinguistic expression often found also in the forms "call" and "so-called", signalling an authorial comment of the periphrasis in order to

reduce its semantic approximation. Other words with the same function found in the texts are “known as”, “mean”, “like”, “a sort of”, “a little” (e.g., “which means it delivers a tiny piece of the coronavirus’ genetic code”; “It means stay at home and don’t go out”), or similes such as “like a crown”, “like a common cold”, “like the flu”, “like a ghost town”. The slide that follows explains the symptoms through four drawings of four head-and-shoulder children with different facial expressions, instantiating “fever, cough, shortness of breath and breathing difficulties”. They cross-refer with the word/s underneath, which describe the symptom, building cohesion and coherence and increasing intelligibility:

- (30) Symptoms of this strain include fever, coughing and difficulty breathing. The infection can also cause pneumonia or even death. (<https://www.cbc.ca/KidsNews/post/heres-everything-you-need-to-know-about-the-coronavirus>)

Maps are frequently present in *NewsForKids.net* to locate the spread of the virus and the stories told, less so in *KidsNews*, where the photographs of cities and people have the same function. When people are depicted, their identification and interpretation are fixed by the title and the caption, which have a labelling function (Nöth 1995: 454). In most cases the image is representative of the topic: for example, the pervasive image of the virus through a microscope has an illustrative function (Barthes 1977; what Nöth 1995: 454 calls ‘pictorial exemplification’), and represents the concept of the virus’ invisibility and smallness, as in the booklets (Section 3.1.2). When text and image mutually determine each other’s meaning, with constant cross-reference, they function as a repetition in the child’s mind, facilitating memorization.

An essential feature of *CBC Kids News* is using videos to answer questions or give explanations. Through their features, videos create meaning (Francesconi 2018) and attract teenagers, helping them understand the topics and the issues involved, as well as instructions to deal with them. In the website, questions are normally conducted by one of the children, who interviews an expert, e.g., a doctor, who confers authority and relevance to the information provided. The video basically develops through turn-taking: the boy makes a statement or asks a question, and the doctor answers, substantiating her assertions. Gestures, questions, voice intonation and noises help convey the message very clearly. The relationship between the doctor and the interviewer on the one hand, and

between both them and their audience on the other, becomes more direct and personal. The pronoun *you* and inclusive *we* are frequent. The questions or main points are often written to emphasize the topic being introduced; expressions are informal and understandable to the audience; paraphrases, definitions, simple explanations or similes are employed: "this is kind of like having a cold, maybe a little more serious than that, but most people (...)", "a small portion of people (...) get a pneumonia, or an infection in their lungs (...)". The doctor's objective is to explain issues regarding the coronavirus, especially to debunk myths and misinformation, but also to give solutions and recommendations, for an easier life and a positive future.

Another video shows the bubble "*Pandemic?*": the whole interrogative structure is omitted to focus on the topic. The girl starts by stating "You probably have some questions you want answered about the coronavirus". Here is one: "What does it *mean* that the coronavirus outbreak is now a pandemic? (...) *Pandemic doesn't mean panic*". And a *Stay calm* bubble pops up. "*Doesn't mean* that we are all *gonna* get sick", etc. This video aims to provide young children with some comfort and reassurance, by appealing to their emotions. It contains all the features of popularization discourse: question/answer format; *you* and *we* for a direct relationship; the use of "mean" to give explanations; the use of the imperative form, contracted forms and informal expressions.

NewsForKids.net uses graphs, green boxes and pop-ups with extra definitions to draw teenagers' attention to the most important issues. Graphs give an immediate picture, a concentration of information, show the relations between variables, and induce perspective. They depict dynamic phenomena and represent a sort of intermodal translation (Marsh – White 2003). However, readers often need to cross-refer with the preceding or following text, otherwise the graphs may be indecipherable.

As regards the use of colour, in *CBC Kids News* colours alternate, making the pages attractive for all children: blue and purple convey calm, while red, yellow and orange stand for excitement. Similarly, *KidsNews* is extremely colourful. The predominant colours are white (for the background), black (for the text), blue, yellow, violet and green, associated with simple and clear verbal and visual structures. Green evokes harmony, stability, safety, and, in western countries, health and nature; blue and white, conservativeness and simplicity; yellow, calm, happiness, sunshine and honesty; violet enhances non-verbal strategies (Cyr et al. 2010). In *NewsForKids.net*, the dominant colours are black, green and white, conveying simplicity, clarity and relaxation.

4. Concluding remarks

In the present study we have tried to identify similarities and differences in the popularization strategies used in the booklets and websites investigated.

They have shown similar strategies in relation to the age of the addressees and their cognitive skills, the “ability to concentrate and to self-regulate, attention span, interests and relational skills”, which require communication to adapt (Cappelli 2016: 76). They broadly use denomination and definition to explain new and difficult words; *how-* and *wh-*question/answer patterns; similes and metaphors, which draw on the features of domains that are more familiar to the young reader. The pronouns *you* and inclusive *we* are used to involve young readers individually and as a group, and give them responsibility for the actions and the measures to take in order to be safer and avoid contagion. The imperative mood is common and appropriate when communicating with teenagers, mainly through lists of do’s and don’ts. The younger age group is addressed through conversational and informal patterns, characterized by the humanization of the virus or a fictional character, which uses the first-person singular pronoun *I*, exclamations and interjections. For teenagers, the style is more consonant with that of a school textbook, for younger children that of a story narrated by a close friend or parent.

The difference between the booklets and the websites slightly increases in the verbal/visual interplay. They both use images and texts in a complementary way, what Royce (2007) calls a model of intermodal complementarity which creates intersemiotic cohesion between text and image, and all semiotic modes contribute to the making of meaning. In some instances, this complementarity may be dominated by the text, in others by the image. Visual strategies pervade the websites, but are essential also in the booklets in creating a close relationship between the writer and the reader, places and things/concepts. The numerous visual metaphors are a feature of these techniques. They also contribute to building the concepts of the virus’s invisibility and smallness. The younger the children, the more frequent the recourse to a humanized image of the virus or a fictional character. Photographs and videos of teenagers either display them mediating between the source and the information supplied or the people and places involved in the news. Videos have proved to be the most engaging knowledge dissemination tool, probably due to their similarity to real life situations, with turn-taking question/answer patterns extremely effective in conveying the message, appealing to emotions, and clarifying doubts. They often resemble a discussion between a parent and

a child, a teacher and a pupil, an expert to non-expert relationship with the power to enable children to feel safer and well taken care of. The relationship between text and image in the data analyzed is essential in reaching children and teenagers with the appropriate message.

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