

Science Journalism Guidelines

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Freelance Journalist

Borrow the Identity of a Science Journalist

Identity Sheet

Name: Binh An Vu Van

Freelance science journalist and reporter for *Le Code Chastenay*, television show aired on Télé Québec.

Education:

DEC in Natural Science
Bachelor's Degree in Computer Engineering
Certificate in Journalism

Winner of the **Bourse Fernand-Séguin** bursary in 2005 (awarded by the Association des communicateurs scientifiques du Québec and Société Radio-Canada).

Hello! My name is Amelia and this is Binh An. We are both science journalists. I met Binh An at a coffee shop this summer. I was curious to know **why she chose this trade**.

"I'm unable to keep things to myself," confided Binh An. I'm terribly curious and I always have a thousand questions to ask. I like to tell people what I have seen and learned.

During my Bachelor's Degree in Science, I took pictures and wrote. One day while watching Découverte, I said to myself, what is this trade of science journalist? I discovered that it involved everything that I like to do: writing and science. I was hooked and I didn't sleep a wink that night!"

What does your job entail?

"For Le code Chastenay, I must find good subjects that I then convert into stories. This requires input, so I talk to people.

For television, one needs to organize shoots, work with producers, and find the shoot location and imagery that explains the subject properly. Then there is the shoot and questions to scientists before the camera. They are very well informed people.

Then I return to write the script for my report. I must popularize the more scientific aspects."

Is your job different from that of a teacher?

"Science journalists are not there to teach, but to inform. Subjects must be contemporary. There is a certain amount of teaching involved along the way, because we must explain what is happening in science around the world right now."

Why do you like doing what you do?

"It satisfies a personal need and my curiosity. It's lots of fun meeting these deep thinkers and bringing new information to the public. We make what is unknown known and help people form

their own opinion on all kinds of issues.”

In short, the science journalist is a witness. His or her role? To see, listen, touch and even smell and taste the latest scientific developments and then share them with the public. Whether writing, preparing television reports, talking on radio or creating a Blog or WebTV, the science journalist shares information worthy of public interest that he or she discovers so that the news does not remain behind closed laboratory doors.

→ Well, now it's your turn: Binh An is handing you her notepad and will follow along during this entire exercise. By noting down items needed at each step along the way, you will be able to write your first journalistic article on science. Let's go!

What should you showcase about science?

The Science Event

Journalists talk about what is NEW. On the radio, the latest hit tune is now being played and everyone is wild about it! Sometimes favourites from the summer of 2005 are played for nostalgic reasons; the same applies to scientific discoveries from 2005: we prefer discussing the latest breakthrough this week!

Science with an Impact

“We need carbon exchange,” exclaims Candidate X during the elections. “No, the solution is taxing the larger polluting vehicles,” retorts his adversary. The science journalist is there to talk about the science behind these fine ideas that politicians are trying to sell to us.

Developmental Science

The electric car is fast at last, the iPod-does-everything, the infallible drug against acne: new technical and scientific knowledge to be disseminated.

Science-culture

In his last conference, Hubert Reeves indicated that he was not worried about the future of life on the planet, but rather about the future of humanity. Science is also culture, with its museums, thinkers, celebrities and trends.

Science in Questions

How does one become a marathon runner, why does popcorn pop, do penguins get cold feet, what are the solutions to dealing with acid rain?

... And Clichés to Avoid

Inaccessible Science

“New chemotherapy against the human immunodeficiency virus blocks the entry of the retrovirus into lymphocytes by covering the protein surface of the cell.” This jargon projects the illusion of knowledge without anyone having understood anything.

Dogmatic Science

It’s scientific, therefore it’s true and do not contradict me. Nothing is more false. Scientists love to argue, refute and advance knowledge by constantly questioning it!

Science Myth

When he puts on his lab coat, he knows everything, sees everything and hears everything ... Well, not exactly. The expertise of the scientist is not absolute. Scientists are men and women like everyone else. Even your chemistry teacher!

To My Notepad

... but I don't have an idea!

Step 1: Hunting for an Idea

An idea is like hunting an animal. Tracking, trapping, and trailing: the methods are as numerous as the hunt itself. It all depends on whether one is following a fox or a trout.

Let's leave the fox, the exclusive news item, the SCOOP, the investigation of the century to the old hands. Instead, let us seek out the small tidbit of scientific news that will cause your friends to exclaim, "Really!"

A GOOD IDEA IS AN INTERESTING IDEA

AN ORDINARY IDEA IS OF INTEREST TO NO ONE

Hunting Grounds 1: Current Events

Newscasts, newspapers, current event websites, Google News: each day produces more news that you will be able to read in a lifetime.

Politics, natural catastrophes, movies: science is everywhere. When the Twilight Zone hit television, a journalist could have written about the biological premises underlying vampirism – there is a disease that really leads to this cadaveric look!

The candidate seeking election as Mayor proposes brown composting bins for each household... but how does composting work?

Scientists tend to live in a parallel world: they each have their own system of magazines, newspapers and websites! In scholarly publications, they discuss their latest findings, share opinions and even argue with each other!

Hunting Grounds 2: Laboratories

What goes on behind the closed doors of laboratories at universities?

Imitation hearts pumping real blood, laser beams that displace atoms, robots being prepared for flight in outer space... It's more real than science fiction. Universities publish **press releases** when one of their researchers makes an exciting breakthrough. An animal easy to catch when one knows how to distinguish the interesting from the mundane.

Attention: Unique Subject

Your subject must be unique and original. To achieve this, find an angle, or a precise method of presenting the subject, a particular point of view. You are the one to choose to bring a certain trend to light, to place such and such research in a particular context or then again, to comment on a scientific controversy.

There are many ways to tell a story. Choose your angle from the very start. Then summarize your proposal in a single sentence, the key sentence that you will write in the next step.

Subject	Subject and Angle in a Key Sentence
Rising sea levels (climate change)	The inhabitants of a small Pacific island must flee because the sea is going to engulf their village.
Ocean abysses	After a 33-year quest, a seabed explorer believes he has found the oldest fossil in the world.
The brain can adapt	A woman can walk and talk normally after having half of her brain removed.

“Always have your radar on red alert”

For Le Code Chastenay, Binh An must find good subjects, be aware of trends and issues, and keep abreast of the latest scientific and technical advances. She explained to me that she *“seeks subjects of interest to people and of concern to them. Sometimes subjects arise from questions I ask myself and sometimes from meetings with others. Then I convert them into stories.”*

An idea can come anytime: you simply need to be vigilant. *“Sometimes,” says Binh An, “it comes to me while I am walking, in the shower or reading a women’s magazine. This is creativity in action. By keeping abreast of news, you are surrounded by ideas and you become adept at finding good ones.”*

“And what is the first symptom of a good idea? It leads to tons of questions! I test ideas on my friends, boyfriend and family members. If they want to learn more, then I know I am on to something,” says Binh An.

Step 2: The Key Sentence

Wow! Hunting was good. You brought back an idea, even a good idea!

Let’s begin by formulating it into a KEY SENTENCE.

The key sentence summarizes your idea in the form of a subject, verb and complement. For example:

Montréal biologists create new, totally artificial bacteria in the lab.

Tears strengthen the bond between two people.

The poor are getting poorer because of global warming.

Step 3: Research

Now that you have an idea, it's time to cook. Spices, seasoning, sauces... And if we were to start with a little research on the Web? Websites like Statistics Canada and the Institut de la statistique du Québec can provide statistics for many subjects including the one of interest to you.

It's worth your while to browse websites of popular science magazines or consult them at the library. Québec Science, Science et Vie, Science et Avenir, La Recherche, Découvrir: perhaps they discussed your subject recently.

University, research group and science museum websites are full of information. Use their search engines to explore their content.

The Internet does not have the answer to everything. A read at your school library can familiarize you with your subject. This will help you prepare interview questions (Step 4) and write your article. Take notes!

Question: Is Wikipedia good?

Wikipedia, a blog, Youtube... how do you recognize a reliable website? When browsing research, make a habit of consulting the section entitled "About us," "Who we are" or "Credits" of websites visited. Who created this blog? A 12-year old girl impassioned by astronomy or Julie Payette? It's better to be informed before relying on the content!

And can you use Wikipedia? Yes and no. Learning more about a subject by browsing an online encyclopaedia may be a good idea. Copying information from this source may prove...boring for your reader! If he had wanted to read Wiki content on a subject, he could have done so himself. Give you reader something to sink his teeth into! And above all, make sure that what you are stating is true rather than rekindling an old rumour.

Hint: visit sources cited at the end of a Wikipedia entry.

Step 4: The Interview

A journalistic article is not worthy of this nomenclature without an **interview**.

Are you writing about the disinfectant power of lemon? Why not ask Mr. Chemistry Professor what he thinks of this discovery? He will surely have an idea on how it works.

Your best friend's mother is a nurse? Why not ask her if she would be willing to use such a disinfectant at work?

Your father's best friend has just bought a hybrid car. Ask him about it. Does he regret trading in

his old jeep?

The interview serves to:

- Complete your research and obtain additional information.
- Better understand and verify your information by speaking with an expert or privileged witness.
- Obtain some quotes.

What questions should you ask?

You have a subject that you have explored through research. But what should you ask an expert? Here are some avenues to explore:

- Do you consider this discovery important or rather minor?
- How does it work?
- Can it have an impact on your daily life or on your work?

Ask all the questions that seem pertinent to you! Above all, don't be afraid and remain courteous at all times.

Avoid questions that may be answered by "yes" or "no" (so-called closed questions) because "No" makes for a pretty poor quote! Prefer open-ended questions that begin with "How" or "Why" or even "Can you explain to me..."

An excellent means of avoiding errors is to repeat what you have understood after receiving an explanation. Use the following form: "If I understand you correctly..." If you have an idea of a metaphor to explain the concept, validate it now with the person you are talking to.

If you don't understand an answer, say so right away, or return to the subject before the end of the interview.

When you have asked all your questions, ask your spokesperson if you have missed anything or if he or she would like to add something or has any questions. If there is enough time, you can even ask if the person would like to discuss another subject.

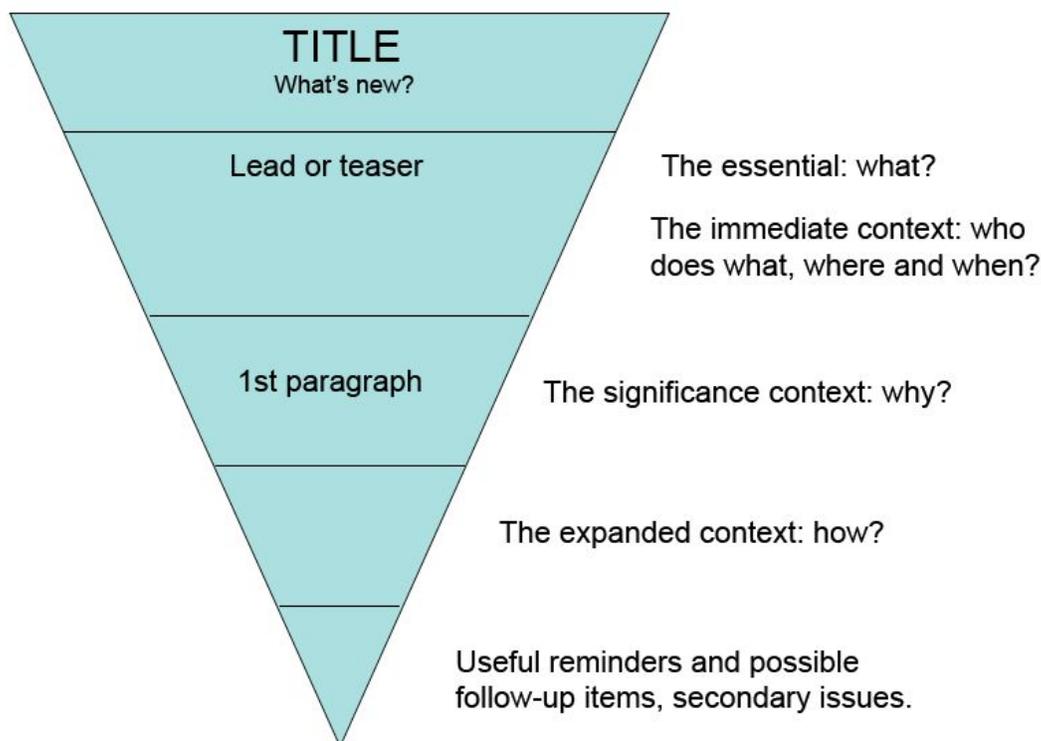
Step 5: Preparing a Plan

In science journalism an article must answer the following questions: Who? What? When? Where? Why? How?

Contrary to texts normally written in class, an article is not written based on the normal "introduction – body – conclusion" structure. To interest readers, the conclusion must come first!

Journalists illustrate this concept using the inverted pyramid associated with these six questions.

Inverted Pyramid



The article begins with a teaser or anecdote (see next step). Then this element is linked to a context. Finally, you may offer a few applications, additional details regarding the methodology or certain conclusions and provide examples and descriptions. **In the inverted pyramid, any new information is supported by information presented in preceding sentences.**

Step 5.1: Finding a Lead or Teaser for Your Article

News should always begin with a teaser or lead. This is often the hardest paragraph to write. Like the title, the lead should make the reader curious.

- The lead summarizes the story and makes the reader want to read the article. It is short and to the point and often consists of one sentence.
- The aim is to say more with few words.
- The most important elements must come first.
- Upon reading the lead, the reader will decide whether to continue reading the story or turn the page or click on another link. The lead or teaser is crucial.

Following are some styles of leads:

The Situation Teaser

If your subject is in line with current events, the lead is ideal. It will insist on the importance of your subject by highlighting its social context. For example, you might introduce a discovery concerning insomnia by discussing the social costs of this reality. Many people have a hard time sleeping with resulting consequences on productivity in the workplace. Statistics are often used.

THE ARCTIC: WHEN THINGS GO WRONG...

(Agence Science-Press) – Not only is Arctic ice melting. The shores are too... in a way. In Alaska, the rate of shoreline erosion has doubled in 50 years. (ASP, February 27, 2009)

The Apostrophe Teaser

The reader exists: why not address him or her directly? Without resorting to the overused form of the type “Hey You, Kid!” this form of teaser is useful when your subject is not linked to current events or to a specific event.

THE PLAYSTATION CRAZE

Are you crazy about PlayStation? Careful, you may catch *Palmare PlayStation Hidradenitis!* (Les Débrouillards, March 4, 2009)

The Interrogative Teaser

This teaser introduces your subject simply by asking a question. Often the question is the one scientific research is attempting to answer in what you are presenting. This type of teaser intrigues the reader and heightens his or her natural curiosity. Example:

WELCOME TO GMB (GENETICALLY MODIFIED BABIES)

(Agence Science-Press) – Do you fear a society capable of choosing babies to be born on the basis of their genes? Does this raise the spectre of future totalitarian societies envisioned in certain science fiction movies? What would you say if your baby might be born without the gene likely to cause breast cancer? (ASP, January 14, 2009)

Step 5.2: Find at Least One Metaphor

Insert a metaphor in your article to make it enticing! A metaphor consists of bringing two items together that share something in common, using imagery, not words. For example:

Amino acids are bricks: together they build proteins, the molecules that produce hair, nails, skin and digestive enzymes.

GMOs are not only found on your plate. Genetically modified bacterial produce insulin. This biological plant allows thousands of diabetics to live normal lives.

Step 5.3: Choose Quotes

- To add credibility to the journalistic article.
- To make the text alive and more interesting.

- To prevent the journalist from exaggerating any claims (for example, explaining the many qualities of a product).

Direct form:

“ [Quote] “ [,] [verb to state, explain, note, believe, support] [title of the person] [person’s name].

“The ability to train efficiently with Wii is truly an interesting discovery,” stated phys-ed teacher Rosaire DuTonnerre.

Indirect form:

For [title of the person] [person’s name] [,] [reformulated quote].

For phys-ed teacher Rosaire DuTonnerre, the fact that one can train efficiently using a Wii game console is an interesting discovery.

Step 6: To Your Keyboard, Ready, Write!

It is now time to complete the last page of your notepad:

- Start from the beginning: rewrite your teaser.
- Don’t forget to sign your article under the teaser.
- Complete your text using your two quotes and your metaphor. Prepare paragraphs with a single idea in mind. Use the model of the inverted pyramid.
- Choose a header presenting the scientific domain of your article. For example, an article on the anti-bacterial power of lemon might have the header: “Ecological Cleanser.”
- Find a title that draws the reader’s attention without exaggerating, or inducing your reader into error.

Last Step: Share

It is now time to share the fruit of your efforts. Have a friend, brother, sister, parent or neighbour read your article. Ask them to be honest:

- Was it easy to understand? If not, which sections need clarifying?
- Would they have read the article on their own after seeing the title and first sentence?
- Did they learn anything they would like to share?
- What did they prefer?

Use this valuable criticism to draft a second, improved version. It is completely normal to rewrite an article after receiving feedback, especially your first article! The greatest science journalists and even Binh An herself have often reworked their texts and reports several times before arriving at a final version of which they are proud.