A Typology of Information

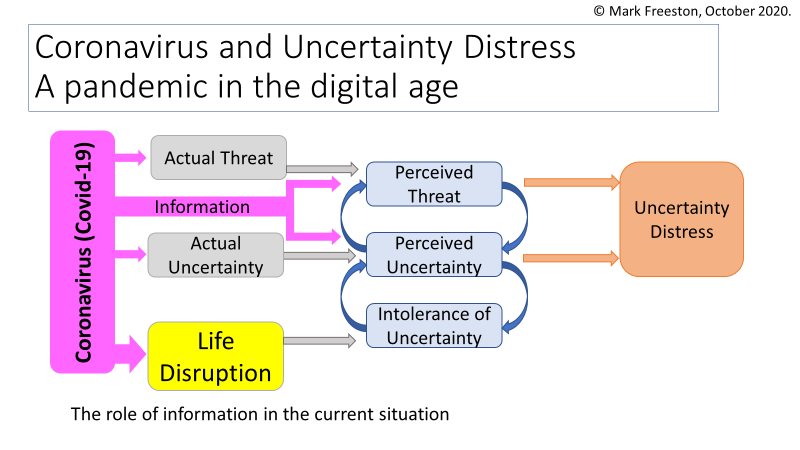
Version 1.0

The uncertainty distress model is a trans-diagnostic and trans-situational framework to understand how threat and uncertainty can lead to distress including, but not limited to, anxiety. The model is available:

Freeston, M. H., Tiplady, A., Mawn, L., Bottesi, G., & Thwaites, S. (2020). Towards a model of uncertainty distress in the context of Coronavirus (Covid-19). *the* Cognitive Behaviour Therapist.

Open access available from: <http://dx.doi.org/10.1017/s1754470x2000029x>

Below is a version of the model that can be used for conceptualizing uncertainty distress and planning treatment. The specific focus of this resource sheet is that it can be used in support of the Managing and Rebalancing Information worksheet. It helps understand how different types of information, including different types of valid information can contribute to perceptions of threat and uncertainty.



Managing and Rebalancing Information

This intervention is predicated on the assumption that many people are receiving a vast amount of information. The information may or may not be helpful, will vary in quality, and may contribute to perceptions of thereat and uncertainty and so to distress. Identifying different types of information and its potential impact may be helpful when planning the “information diet” proposed in the Managing and Balancing Information worksheet.

**The resource sheet**

“In war, truth is the first casualty” has been variously attribute to the ancient Greek tragic dramatist Aeschylus (525 BC - 456 BC), Samuel Johnson in The Idler in 1758, and more recently to Hiram W Johnson, a US senator for California during WW1. “Fake news” entered the Oxford English Dictionary in 2019 and never truer than at the moment. While there is a tremendous amount of untrustworthy information, misinformation, and disinformation that qualifies as fake news, it is also used to discredit what may be potentially accurate but inconvenient information for a given person or position.

The typology of information we have been using is based on two articles from medical information scientists from Iran, where there was an early outbreak (Ashrafi-rizi & Kazempour, 2020a, 2020b). Back in January and February they were on the case, observing, sampling, and reflecting on what was happening across various media. They published in March. I contacted them in April, and what I present below (with their permission) is their categories, reordered/categorized, with some further consideration of the impact.

Ashrafi-rizi, H., & Kazempour, Z. (2020a). Information typology in coronavirus (COVID-19) crisis; a commentary. *Archives of Academic Emergency Medicine*, *8*(1).

Ashrafi-rizi, H., & Kazempour, Z. (2020b). Information diet in covid-19 crisis; a commentary. *Archives of Academic Emergency Medicine*, *8*(1).

Their framework provides us with an opportunity to think about the range of information we are exposed to, may notice, or actively seek out. It also allows to think about the effects on us, regardless of the way, motivated or not, we came across it in the first place. The resource sheet is illustrated with examples about facemasks taken from various sources between April and October 2020. It is designed primarily for therapists to understand the different types of information and their effects, rather than as a worksheet to use for patients.

A Typology of Information

Version 1.0

Illustrated by various sources on the topic of face masks

|  |  |  |
| --- | --- | --- |
| Type of information | Nature | Impact |
| Essentially accurate information | | |
| Valid | Has an outcome: e.g. Wear a mask like this!  <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks> | Action; small certainties |
| Perplexing | Complex and/or badly targeted  <https://royalsociety.org/-/media/policy/projects/set-c/set-c-facemasks.pdf?la=en-GB&hash=A22A87CB28F7D6AD9BD93BBCBFC2BB24> | Uncertainty |
| Contradictory | Genuine disagreement – but unclear why:  August in some parts of Europe:  <https://fee.org/articles/europes-top-health-officials-say-masks-arent-helpful-in-beating-covid-19/>  August in the UK:  <https://www.mirror.co.uk/news/politics/full-list-places-you-need-22450921> | Uncertainty/Mistrust |
| Progressive | Forward looking – leads to innovation  <https://www.dailymail.co.uk/sciencetech/article-8893983/Face-mask-injected-antiviral-chemicals-deactivates-coronavirus.html>  <https://news.northwestern.edu/stories/2020/10/face-mask-aims-to-deactivate-virus-to-protect-others/>  <https://www.foxnews.com/health/heated-face-masks-coronavirus-researchers-testing-prototype-university>  Article:  <https://doi.org/10.1016/j.matt.2020.10.012>  Preprint:  <https://arxiv.org/abs/2010.11336> | Promise of (much) later certainty, may emphasize what we don’t know now.  Don’t (necessarily) reject story because of messenger or tone of message: Daily Mail and Fox News stories check out in these cases! |
| Inaccurate information | | |
| Doubtful/Untrusted | Can neither be validated or discredited, at least not easily  This account is harder to make sense of than the original claim as it purports to examine original claim it from various angles: <https://www.collective-evolution.com/2020/10/07/one-of-europes-leading-neurologists-claims-masks-are-dangerous-explains-why/>  Same article posted across multiple sites that some consider to be low on facts and with interests in conspiracy theories and pseudo-science. | Uncertainty/ fear/ false hope |
| Shocking information | Not in balanced form  1: One person’s view: <https://www.meehanmd.com/blog/2020-04-28-when-wearing-a-mask-makes-you-sick/>  2: Original claim by a neurologist was on YouTube but taken down; transcript can be found here: <https://www.collective-evolution.com/2020/10/07/one-of-europes-leading-neurologists-claims-masks-are-dangerous-explains-why/>  Same article posted across multiple sites that some consider to be low on facts and with interests in conspiracy theories and pseudo-science 3: Study by CDC apparently says something shocking (85% of Coronavirus Patients Reported Wearing Masks ‘Always’ or ‘Often’) according to reporting of a study by one right of centre news organization: <https://www.breitbart.com/politics/2020/10/14/cdc-study-85-of-coronavirus-patients-reported-wearing-masks-always-or-often/>A left of centre organization debunked the original claim and made a point of associating claim with a specific individual: <https://www.rappler.com/newsbreak/fact-check/face-mask-wearers-catch-coronavirus>.The actual study: <http://dx.doi.org/10.15585/mmwr.mm6936a5> | Fear/Uncertainty |
| Misinformation | Inadvertently spread: Here is a sources that discusses mis/disinformation about masks – it contains several examples: <https://sciencebasedmedicine.org/misinformation-and-disinformation-about-facemasks-and-covid-19/>  More generally about misinformation and Coronavirus with lessons from climate change: <https://www.nationalgeographic.com/science/2020/10/guide-to-overcoming-coronavirus-misinformation-infodemic/> | Fear/Uncertainty |
| Disinformation | Deliberately spread: Here is a sources that discusses mis/disinformation about masks – it contains several examples: <https://sciencebasedmedicine.org/misinformation-and-disinformation-about-facemasks-and-covid-19/> | Fear/Uncertainty/Mistrust |
| Missing information | | |
| Postponed | Accurate information released later or when under pressure  These may be reported from political or another strategic angle:  <https://www.bma.org.uk/news-and-opinion/government-makes-wearing-face-masks-mandatory>  <https://reason.com/2020/06/11/the-government-was-wrong-about-masks/>  <https://www.nytimes.com/2020/03/17/opinion/coronavirus-face-masks.html> | Mistrust; undermines other accurate sources |
| Confidential | Assumed to be there but hidden for (political) expedience  These may be reported from political or another strategic angle:  <https://www.telegraph.co.uk/news/2020/07/14/ludicrous-mask-decision-shows-government-driven-fear/>  <https://dvelup.com/coronavirus_face_masks_what_theyre-not_telling_us/> | Mistrust: The expectation of this type of confidential or hidden information may come from previous postponed or contradictory information. |
| Other information | | |
| Comforting information | Jokes, slogans, entertainment  Joke: *Just been into Starbuck and the barista was wearing a face mask. I asked, “Why are you wearing a surgical mask?”. They said, “I’m not, it’s a coughy filter”*  <https://yellowjokes.com/barista-jokes>  Cartoon: <https://raesidecartoon.com/vault/covid-19-face-masks-underwear/> | Social support, solidarity, perspective changing |

**Back to Peter:**

*There are some clear implications.*

*The first is to clearly identify what information he needs to know, why he needs to know it, and how much of it he needs. This is fairly straightforward because there is a clear criterion: Does it make a difference to what I can/cannot do today, tomorrow? And possibly next week... (but as of November 2020, a week away seems a long time)?*

*The second is to start to identify the more obvious sources of mostly unhelpful information. One way is to identify how this “information” is arriving. Is Peter looking for it? Is it a more sensationalized version of the type information he has been looking for? Is he tripping over it while looking for other things? Is it packaged or labelled in a way that will prompt him to click? If it were an advertisement for a product to buy, would he follow it up? If he had been researching similar products, what criteria would he apply to a product advertisement that “turned up” out of blue? The more the indicators, the more likely it is to be unhelpful. As has been said a long time ago before the digital age, “the medium is the message”, (Marshall McLuhan, 1964) – despite the sophistication of the people pushing the information at Peter, there may be some clues.. There are products that Peter wouldn’t buy even if he gets a “heads up” message about it. Can he apply the same skills to these other types of information?*

**Making sense of outlandish but intriguing news. Reject it out of hand, give it some consideration, or follow it down the rabbit hole?**

Importantly, because of fake news, realistic scepticism and understandable mistrust, it means that some unlikely news stories that may actually have a factual basis are rejected. Parsimonious narrow explanations of large events are rejected in favour of complex wide-ranging conspiracy theories. Likewise, hopeful, unusual, blue sky thinking, proof of concept studies that could provide a “partial solution” may be either given too much or too little credence. Either these stories are given too much credence by many because of lack of scrutiny and desire for good news, e.g. Of the type: “Vaccine will be available by (pick your month”. Or they are rejected because this seems unlikely, and so “This must be fake news”.

Progressive or hopeful information, that may help balance an information diet, can be easily discredited by others, especially if they have an angle.

**An example: The Camelids hold the key to the Coronavirus vaccine:**

One story we have been tracking since June and using as an example in workshops is the idea that Alpaca nanobodies may save the world from Coronavirus… Easy to dismiss, easy to blow up into something fanciful, but the actual status is somewhere between the two. i.e. Promising, exciting, factually based, novel, innovative but essentially uncertain, and this is uncomfortable…

Check it out for yourself:

This was one of the original stories from June 2020… I have followed threads/links from that time that showed that the basic science checked out: Uni websites, study registrations, etc.

<https://www.independent.co.uk/news/health/coronavirus-alpaca-nanobodies-immunity-research-karolinska-university-sweden-a9589791.html>

This is a more recent story from October 2020:

<https://www.medicalnewstoday.com/articles/hopeful-research-findings-7-months-into-the-covid-19-pandemic>

This is backed up by the key article:

<https://doi.org/10.1038/s41467-020-18174-5>

In fact, the background is much older, see this article from 2017:

<http://dx.doi.org/10.1016/j.bbagen.2017.06.014>

So, the potential application to coronavirus was inevitable, not surprising, but the outcome as to whether it will lead to vaccines/treatments is still highly uncertain.

What can we conclude? On balance, much information (even good news) does not provide answers, it may create hope, but it also creates uncertainty.

**Back to Peter:**

*In the case example, if Peter limits his use of media where people are “basically reporting things in good faith”, he may miss out on this news thread. If he does find this, and thinks this is interesting, then he will need to decide what to do with it. There are several possibilities:*

1. *Rejecting it is the easiest solution but may be difficult if he is intrigued – and there is possibly something in this story.*
2. *Following it up doggedly and checking it out is hard work and Peter will need to track the story pro-actively, and even if he does, this will not lead to certainty. The answer is in the future, probably years away. But it is still “Good News”!*
3. *Another possibility is Peter could conclude: “That’s interesting, I wonder if anything will come of it”, and then “wait and see” what happens. In this case Peter should neither research heavily, nor reject out of hand… just be curious and wait and see if it turns up again.*

*Then there are two possibilities. Peter could decide to:*

1. *Plan to follow it up again in a few weeks or months.*
2. *Do nothing, wait and see, based on the idea that if this is important, it will turn up again (and he probably doesn’t need to go looking). This could be considered one form of tolerating uncertainty.*

**One of “Europe’s Leading Neurologists” Claims Masks Are Dangerous:**

The same types of processes and some others may occur for “scary news”.

We can also find the opposite scenario for “bad news” where scary stories based on unwarranted interpretation of science, or “Scientific opinion” gain credence and find traction, or debate, or are then used to muddy the issues. A case in point is how various “alternative media” across the spectrum have all run/reacted to the news or tried to make use of the story that a “reputable Neurologist” has said that face masks can cause hypoxia and so brain damage.

The original interview has been removed from the web, but the transcript is available and widely reported. Mostly from one initial attributed/named source that has been posted many times across other sites. And is easily fact checked: and various sources have done so; either in the pursuit of truth, or in pursuit of some other agenda – not all fact checking is neutral. Facts are not neutral.

Left and right of centre, science and alternative science, and mainstream vs alternative media, and scientific viewpoints vs conspiracy theorists have all run with this this story in various ways and for their own purposes. It seems, in this case and others, that what seems like some combination of commitment to “truth”, pursuing sales/clicks, inadvertently or deliberately muddying the debate on this issue, or using it for strategic purposes to undermine particular positions on the opposite side of the debate, there is a potential for anything surprising or apparently unexpected to be enlisted for various reasons: protecting a stance, influencing opinion for various purposes, misinforming for gain, disinforming for gain, or simply exploiting for clicks/profit, etc.

**Back to Peter:**

*In terms of Peter in the case example, this type of news is “all about them”.*

*He needs to decide what to do with this. Ignore it? Spend 10 minutes on it? Or follow it down the proverbial rabbit hole?*

*Even then, he can follow it on the basis that “there may be something in this, but probably not”.*

*Or on the basis that “this is a rabbit hole, what is interesting is the development of the story, not the content”.*

*Or even… “I have better things to do with my attention/my time/my life….”*

*And once again he can decide to wait and see, based on the idea that if this is important, it will turn up again (and he probably doesn’t need to go looking). This could be considered one form of tolerating uncertainty.*

**The Information Diet – A parallel:**

The odds are probably stacked against the consumer of unhealthy foods. Likewise, the odds are probably stacked against the consumer of information. There is too much money to be made getting us to consume things that in the long run (however tasty) are not good for us. And we haven’t even mentioned how FOMO may also drive unhelpful information consumption! It may take a conscious decision, a clear plan, and some concerted efforts to manage the information we receive so that we get on balance, helpful (actionable, practical, life-affirming, value-consistent) information. To pursue the diet analogy even further, diets based on restriction alone may be hard to follow. Diets based on balance may be easier to follow, and more successful in the long run. So rebalancing information may be the key.