

# 1

## What Health Is

Let's start with the story of one of my patients, John.<sup>1</sup> He is late to his occupational medicine clinic appointment, but he eventually shows up. He is in his thirties. His lab results are not good. I am not easily worried by most urinary metal-testing results I review. In many cases, patients have “heavy metal screenings” outside of the best medical practices. Results are usually either totally fine or skewed because patients have been asked to take what we call a chelator, a molecule that is meant to trap metals, which artificially increases the metal levels and generates unnecessary anxiety for patients.

But for John, it is different. It is likely that there is something very wrong going on at his workplace. These results are strongly suggestive that he has important exposure to toxic metals, including arsenic. Arsenic is a substance known to increase the risk of lung and skin cancer. It gets quite serious.

So, I am meeting with him. He feels fine. He has no symptoms. He got tested because his employer told him to do so. That's it. He loves his job. He got a promotion two years ago. The pay is better, and there is no doubt he appreciates that in the context of inflation and the increased mortgage rates we had at that time. He tells me how he sticks to all work procedures: he brags a little bit and tells me that he is doing way better than the previous guy who was in his position. Each time I ask about potential issues with this complex industrial process, like leaks or broken equipment, he argues that as he follows all the procedures, everything is fine.

I am not convinced. The toxic metals he has in his body must come from somewhere. I am very skeptical, and it is getting worse as I am listening to him. As he describes the process in depth, I mentally pinpoint more and more sources of

---

1 For all individual cases mentioned in this book, I have systematically modified the name of the patient and identifiable elements to protect the patient's identity.

exposure to these toxic metals, and opportunities for these substances to contaminate the air, or splash onto workers.

John's life has not always been easy. He has used a lot of different substances in the past, but he is healing. He is now off everything, including tobacco. He struggled a lot with his mental health in the past, but he is doing much better now. He has several medications, including for his mental health; he has a follow-up with a therapist and great social support. In a word, his life is balanced now.

Clearly, I would prefer him to be in another job or going back to the unexposed (and less risky) position he was previously in. *"That's not gonna happen, doc!"* It's a family-run business. They have been good to him during these many years.

In a word, that's John's story: a worker who should absolutely quit their job but – at the same time – shouldn't.

## Who Decides What's Health: Patients or Experts?

This story is our starting point, as we are about to discuss health. Back in the days, more than 20 years ago, when I was starting my journey at medical school in Nantes (France), our professor of public health and preventive medicine, Pierre Lombraill, provided us with the World Health Organization (WHO) definition of health: *"health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."*<sup>2</sup> It was one of those fundamental definitions that we really needed to memorize during our training.

That said, I have always struggled with this definition: *not merely the absence of disease or infirmity*. Why does the WHO seem to define health starting basically with a description of what it is not to have a disease? And then say, *"oh wait, by the way, it's not merely the absence of a disease"*!

It was years later – when I was studying work psychology in Paris – that I started to grasp what the problem is with this definition. I understood the difference between naturalism and normativism.<sup>3</sup> It is worth explaining that. The WHO definition is based on a naturalist approach (also called normalist). This means that criteria which define what good health is are decided by others, by a third party, by the WHO, by whoever, but not by the patient themselves. Health is seen as conforming to external criteria. Criteria that help qualify someone with a state of complete physical wellbeing, complete mental wellbeing, and complete social wellbeing.

2 WHO. *Constitution*. Available from <https://www.who.int/about/accountability/governance/constitution> (accessed on November 3, 2023).

3 Broadbent A. Health as a secondary property. *The British Journal for the Philosophy of Science* 2019; 70: 609–627.

Another approach to health has been theorized by Canguilhem, one of those authors that I studied in my first year at medical school and whom I vaguely remembered while studying it again, many years later. Georges Canguilhem (1904–1995) was a French philosopher and physician. I would not say that he is particularly easy to read or grasp, so I'll try to keep it simple. He had a normativist approach to health, summarized as follows: “*I am feeling well as I am able to be accountable for my own actions, to bring things into existence, and to make links between things that would not exist without me.*”<sup>4</sup> Feeling well is certainly not just complying with external criteria. It is not even a state of wellbeing. According to Canguilhem, we can be perfectly healthy while not being in a complete state of wellbeing. I can have a disease, but still be accountable for my actions, bring things into existence, and make links between things that would not exist if I did not create them.

Alex Broadbent, a professor of philosophy of science at Durham University (UK), summarized the difference between naturalism and normativism as follows:<sup>5</sup>

*Naturalists hold that health is objective and value-free, while normativists hold that health depends upon humans by depending upon their values.*

I generally use an illustrative example to explain that. Let's assume that your lifelong dream is to climb Mount Everest. Honestly, I would rather stay under the blanket on my couch while drinking a hot chocolate, but I respect everyone's dreams. The day you end up doing it, we can easily agree that it's helpful for your health – that you will likely be accountable for your own actions (you climbed that big hill yourself, and not someone else). However, it's likely that you're going to have frostbite, be short of breath, very painful, possibly sunburnt, and suffer from multiple other issues related to extreme conditions up there. You are not likely to be in a “*state of complete physical wellbeing,*” are you?

Richard Horton, Editor-in-Chief of *The Lancet* – one of the top-notch medical journals – wrote a piece on Canguilhem in the *Journal of the Royal Society of Medicine* in 1995.<sup>6</sup> His words can help clarify Canguilhem's views further:

*Normality [or naturalism] is usually defined from limits derived from population data: e.g. “normal” laboratory values. This statistical definition*

---

4 « *Je me porte bien dans la mesure où je suis capable de porter la responsabilité de mes actes, de porter des choses à l'existence, et de créer entre les choses des rapports qui ne leur viendraient pas sans moi* » in Canguilhem G. *Écrits sur la médecine*. Le Seuil, Paris. 2002 (p. 68).

5 Broadbent A. *Ibid.*

6 Horton R. Georges Canguilhem: philosopher of disease. *Journal of the Royal Society of Medicine* 1995; 88: 316–319.

*of normality implies that abnormality – pathology or disease – is simply an excess or a deficit of a particular variable (...) Yet Canguilhem categorically rejects such a view. He regards normality and health as being functional characteristics of the whole organism. He defines health as the ability of the organism to adapt to challenges posed by the environment, to create new norms for new settings. (...) Health for Canguilhem, “means being able to fall sick and recover.” By contrast, “to be sick is to be unable to tolerate change.”*

Health is not a complete state of wellbeing, but worse, health is first and foremost not a state at all. It is a dynamic concept. It changes over time. And health is unlikely to be divided into sub-topics (physical, mental, and social), looked at bit by bit to check whether it matches an external definition of “wellbeing.” This goes along with the movement toward “deindividualization” of medicine, as explained by Richard Horton in another paper.<sup>7</sup> Globally, what we call “the medical world” has tried to find objective definitions, so it is operant to conduct research and provide evidence-based care. However, in doing so, we might have missed that each time we pick up certain characteristics to assess patients, we miss a significant portion of the overall picture. When we assess the efficacy of a blood-pressure medication by looking only at the blood pressure, we miss the subjective lived experience of what it is to have high blood pressure, and what it is to take this medication. When we look at the efficacy of a chemotherapy to treat lung cancer in terms of increased life expectancy, we miss the quality of life. And probably, even when we measure the quality of life using standardized questionnaires, we must acknowledge that they can only provide a partial view of health.

I am not the only one to be bothered by the WHO definition of health. Cara Kiernan Fallon and Jason Karlawish from the University of Pennsylvania also consider that the WHO definition implies that being healthy excludes having any disease.<sup>8</sup> They consider that seeing health through the absence of disease leaves behind the many people who have chronic conditions. Nowadays, many people are treated for diabetes, high blood pressure, or AIDS, and live a perfectly normal life. When asked if they have a health issue, they are likely to respond “no”! Fallon and Karlawish wrote that “*having a disease and feeling healthy are no longer mutually exclusive.*”

7 Horton R. Offline: the silence of the organs. *The Lancet* 2012; 380(9846): 961.

8 Kiernan Fallon C and Karlawish J. It’s time to change the definition of « health ». *STAT website* 2019 Available from <https://www.statnews.com/2019/07/17/change-definition-health/> (accessed on November 8, 2023).

## Judging Workers' Practices and Paternalism

Let's go back to the story of John. He presents with scary urinary metal testing. I would argue that he does not meet the criteria of a “*complete state of physical wellbeing*.” However, he told me that he feels well, and he is healthy! My life as an occupational medicine specialist would be much easier if patients had the decency to agree with my vision of what's good for them and what's not. Unfortunately, patients and workers sometimes have different views of what's good for them, and what's not. Worse even, they may tell their doctor that they agree while screaming inside, “*I don't care about a single bit of what you say*.” Worse even again, being a patient as well, I also (sometimes) disagree with my healthcare providers (but not often, I swear). I think of a dentist who once told me to stop drinking tea, as it was staining my teeth. Like John, I told him “*it ain't gonna happen doc*.”

The concept of health is not the exclusive property of physicians or healthcare workers. Everyone is entitled to have their opinion on what their health is. Workers included. Unfortunately, that's not always translated into practice. Paternalism is still much too common in occupational health. We – occupational health professionals – are trained to know better than workers regarding their own health, their own safety. To know better than them how to behave. To know better what's good for them. In fact, this form of paternalism is not restricted to occupational health professionals, but it easily extends to anyone placed in a judging situation.

Let's take an example. Social media are full of videos showing workers obviously not complying with common expectations in terms of safety standards. These have very empathic titles such as “TOTAL IDIOTS AT WORK” for instance,<sup>9</sup> compiling dozens of short clips. These videos are not only about workers. Sometimes they also show people obviously outside of any professional context. But the common theme is that they display people injuring themselves, or in risky situations, for entertainment purposes. Because it's (apparently) fun to watch people being hurt. The videos may come with funny music or pre-recorded laughter on top, which makes them even funnier (apparently). So, you can look at a worker trying to fix a hydraulic trailer and placing himself underneath it. The way the video is built (the title including the word “idiot,” the presence of funny music or laughter) places us in an easy judging situation. From the comfort of our couch, we're all set to judge him, out of any context, easily bringing us to the conclusion that, “*yeah, this guy is an idiot, not respecting basic safety rules*.” Obviously, these videos fail to provide any context that may explain why these workers may come

---

<sup>9</sup> I endured for you « TOTAL IDIOTS AT WORK 2023\Fail Compilation #135 ». Available from <https://www.youtube.com/watch?v=IXj9HTDhx1Q> (accessed on November 16, 2023).

to these extremities. We are driven to think of them as stupid individuals, failing to abide by commonsense guidance. In doing so, we integrate that safety is essentially a matter of setting up the rules and complying with them. Should this fail, it's the responsibility of these (idiot) workers who did not comply with the rules. Easy.

Doing walkthroughs in industry, visiting workshops accompanied by top executives, is not always a very different experience. The judgment setting is enhanced by a clothing differential: we may be face to face with blue-collar workers really wearing blue coveralls and white-collar workers really wearing white shirts. These experiences might be closer to industrial tourism (which is another form of entertainment) than real work analyses. In such situations, workers can sometimes be humiliated by occupational health and safety professionals, pointing out how wrong they are during the five and a half minutes they spend visiting the workstation where the worker has been 8 hours a day, 40 hours a week, during a 20-year career.

## Demarcy's Workbench at the Citroën Car Factory

This phenomenon was very well described by the French work sociologist Robert Linhart in his book *L'établi (The assembly line)*.<sup>10</sup> Born in 1944, Robert Linhart obtained a PhD in work sociology.<sup>11</sup> He ended up being appointed as associate professor in the department of philosophy at Paris VIII University at the peak of political, social, and societal changes that led to the events of May 1968, with huge strikes and demonstrations from students and blue-collar workers. This led to profound societal changes in France. It was in this context that Robert Linhart decided to get enrolled as a blue-collar worker in a Citroën car factory. He wrote *The assembly line*, where he describes his experience as a specialized laborer, working on the assembly lines of Citroën.

I am totally going to spoil it, so if you intend to read his entire book (which you should), I invite you to skip the next few paragraphs.

The last chapter is possibly among the my favorite pieces of literature about work. Robert Linhart describes the work of his colleague, Demarcy, the retoucher in charge of repairing 2CV (that's the name of the car) doors that were impaired during the assembly process. These car doors got bumps and defects: it was Demarcy's job to make them pristine again, so they could be used to build brand new 2CVs. The factory had a Taylorized<sup>12</sup> organization: methods experts decide

10 Linhart R. *L'établi*. Les éditions de minuit, 1978.

11 Robert Linhart's sister, Danièle Linhart, also became a very well-known work sociologist.

12 Based on management principles from Frederick Winslow Taylor.

how work must be organized. The less they consult with workers on the ground, the better it is, from their point of view.

One day, a method specialist noticed that Demarcy was working on an old workbench that was absolutely perfect for his job. He had adjusted it, improved it, modified it over the years. It really was a tool that made his job possible.

*A white coat wandering around on inspection day may have winced at the sight of this do-it-yourself unorthodox workbench. What's that thing? And, in fact, if you watch Demarcy work for just two or three minutes, he seems to waste time tinkering with his bench, moving nuts about, adjusting the wedges. Obviously, if you watch for a long time you realize that all this is in order and that the retoucher uses his bench to excellent advantage. But the fellows from work-study won't spend hours at each work position: a few glances and they're certain they've understood. They've followed courses and everything, they know about the scientific organization of work!<sup>13</sup>*

All of this does not look great to the methods guy. It does not meet the quality standards. He gets the workbench changed. A brand new one is delivered to Demarcy. Anyone would think that he might have been happy to be provided with new material, right? Of course, he is not. He is totally devastated by this change. He is lost, unable to deal with the car doors. A couple hours later, there is a walk-through of the workshop. A group of white-collar workers has a look at Demarcy, ill-equipped with his new workbench that he cannot do anything with. As the entire group is scrutinizing him, he lets his hammer fall to the ground.

*"For goodness' sake! What's all this muddle?" Bineau's voice, loud and angry, has cut short the old man's movement. For a second he remains bent, frozen in his posture, his fingers a few inches away from the hammer. Then he continues his movement slowly and comes up again shamefaced, while the director explodes and sputters. Bineau: "I've been watching you for a quarter of an hour. You're doing just anything! The best machines are no good if the man using them doesn't make an effort to understand their functioning and use them correctly. You're given a modern system, carefully perfected, and that's what you do with it!" Demarcy: "I don't know what's come over me sir, ... Perhaps it's tiredness... Usually..." Gravier: "Listen, old man, don't tell Monsieur Bineau your life story. You'd better listen to what he has to tell you and try to work correctly."*

---

13 Linhart R. The assembly line, translated by Margaret Crosland. 1981. London. John Calder.

The artificial setting of the walkthrough, the power differential... All of this is organized so the white-collar workers, wearing their hard toes and hard hats they use once a year, can judge workers with 20 years of experience. No matter what we can catch in a glimpse of a walkthrough, we are never going to spend enough time to capture everything that the worker does. One must be extremely careful with what walkthroughs bring. Ergonomist Jacques Duraffourg considered that we should look at work being “*humble, curious, and caring.*”<sup>14</sup> That is probably a motto that anyone involved in a walkthrough should read prior to visiting workshops.

### **“Workers Are Not Morons!”**

One of my mentors in occupational medicine was Jean-Yves Dubré. He had been working for many years as the occupational medicine specialist for a slate quarry, close to Angers (France). At the end of his career, he became an occupational medicine labor inspector. This position is similar to director of medical services for the ministry of labor but working at a regional level. I had my very last rotation, from May to November 2013, as a resident in occupational medicine under his supervision. Jean-Yves was a very respected physician, known for his expertise in work psychodynamics: I will touch on this later in this book.

In his job as an occupational medicine labor inspector, he regularly had to hold discussions with workers, union representatives, employers, human resources, and elected officials. He had to look into workers’ and employers’ appeals regarding unfitness for work decisions, and proceed to accreditation visits of occupational health services. I was accompanying him in these activities, which was a great learning experience for me.

One thing he said regularly was, “*workers are not social morons!*”<sup>15</sup> This came from a publication by three main figures in work psychodynamics: Christophe Dejourn, Dominique Dessors, and Pascale Molinier.<sup>16</sup> These authors have warned us on the issue of quick judgments of workers’ behaviors.

---

14 Chassaing K, Daniellou F, Davezies P, Duraffourg J. Recherche action: prévenir les risques psychosociaux dans l’industrie automobile: élaboration d’une méthode d’action syndicale. 2012.

15 The original sentence in French is « *les travailleurs ne sont pas des crétiens sociaux* », coined by ethnomethodologist Alain Coulon.

16 Dejourn C, Dessors D, and Molinier P. Comprendre la résistance au changement. *Documents pour le médecin du travail* 1994; 58(2): 1–8.

*Even when a worker refuses to wear his hard hat, even if he takes risks that he could avoid, even when he is reluctant to comply with prevention messages, his behavior is not absurd, it has always a sense.<sup>17</sup>*

Understanding the worker's perspective was critical for Jean-Yves Dubré, as well as for Chantal Bertin, another important physician in my occupational medicine training. Chantal was one of the occupational medicine specialists working for Angers city occupational health service. I was a resident there for a total of one year, between 2011 and 2013. Chantal is certainly my role model. She was literally devoted to her work (way too much). Rather than seeing her job as scrutinizing workers and seeking the slightest reason to declare them unfit for work, she always spent a lot of time understanding workers. She is the most empathetic physician that I ever met. Every job is a source of excitement to her. Every discussion with a worker providing her with details about what they do was a source of thrill. There is probably nothing of no interest to her. Her excitement is contagious and really shaped my own vision of the job of being an occupational medicine specialist. The vision I am trying to convey through these lines.

You can easily understand why then, one day when she told me "*Next Saturday, we are going to go to the Place du Ralliement [to] see the morning team of street cleaners. They start their shift at 5 in the morning.*" I was (for once) happy to get up early on the weekend. We were meeting them to see whether the new electric leaf-blowers they were provided with were really better than the regular gas ones. Although the new ones were way lighter and less noisy than the old ones, they were not powerful enough. They had to spend more time trying to push the leaves and garbage to build up piles, moving their arms more, and likely increasing their musculoskeletal strain.

It seems quite easy, from the comfort of our office, to provide suggestions for improvement that look obvious. Again, the judging: "*you should do this, you must do that...*" Switching a heavy, noisy, gas-containing leaf blower to a lighter, quieter, electric one should indeed fix all potential health issues, right? It is once we understand what's going on in practice that we can understand why workers complain about new materials that are provided to them. And that they have good reasons to complain: the new equipment is probably more likely to displace a health issue, rather than fixing it.

In this case, workers were arguing, because of their health, against a tool that was meant to improve their health. However, workers can argue about occupational health using arguments outside of health. Let me explain that, with another example from my time at Angers city occupational health service.

---

17 Translation from the French by the author.

## Losing Your Job: One of the Top Occupational Risks for Workers

This time, Chantal provided me with some work to do. I was there for that. She asked me to run the mandatory periodic assessment of city garbage collectors. I prepared for that by doing a participatory work observation: I spent a full shift collecting garbage myself, at the back of the truck, in the countryside of Saint-Sylvain d'Anjou, a rural town close to Angers. There, the garbage collection process was not automated. Workers needed to get off the truck, pick up the bin, roll it to the back of the truck, secure it on a sort of fork, activate a button to lift it up, empty it, and put it back where it first was. I met with more than 50 workers of this department. Almost all of them were proud of their work; they were contributing to the cleanness of the city. They were benchmarking their work against other cities, not as clean as theirs!

Garbage collection is work that is more complex than it looks. There are many safety issues. Most garbage workers remembered a fatal injury that happened, a couple of years before. It was in 2005, in Cholet, another town not far from Angers.<sup>18</sup> Guillaume was a summer worker, collecting garbage. He slipped from the back of the truck and was crushed, as the truck was reversing. He died later in hospital, aged 22. After that fatal injury, safety had been enhanced, with cameras and alarms on garbage trucks.

I used my time with each of the garbage collectors I met, trying to understand better this complexity. One of them provided me with a typical example. There was this rule: you are to collect garbage only on the right side of the road, except if the truck is on a one-way street. This rule was meant to prevent workers from crossing the street to collect bins on the other side of the road, where they could be hit by cars. However, in practice, one of the workers told me there were circumstances when they were not applying the rule: if they were collecting garbage at a crossing light, they would collect on both sides. By doing so, when the truck came back, it would not have to stop at the green light to collect the bin, and deal with unhappy honking drivers. They were going against the rules, but had a rational reason leading to the decision: they balanced the risk of being hit by a car (quite rare) and the risk of being honked at because the garbage truck is stopped at a green light to collect bins (quite frequent, given that there are approximately 1200 crossing lights in Angers),<sup>19</sup> and dangerous behaviors from drivers (doubling the

---

18 This article from January 21, 2011 reports on the trial that took place for manslaughter (in French): [https://angers.maville.com/actu/actudet\\_-pres-de-cholet-le-jeune-eboueur-avait-ete-ecrase\\_9-1662870\\_actu.Htm](https://angers.maville.com/actu/actudet_-pres-de-cholet-le-jeune-eboueur-avait-ete-ecrase_9-1662870_actu.Htm) (accessed on November 23, 2023).

19 Information retrieved from <https://cpu.angers.fr/product/signalisation-lumineuse-tricolore-signal-feu-tricolore-2> (accessed on November 27, 2023).

truck because they are angry at being stuck at a green light for 30 seconds). In this unconscious adjudication process, workers balanced the risk to their health (being injured) with exposure to a psychosocial hazard (being honked at) and the risk for the community (the risk of car accidents due to angry driver behavior). They eventually decided that it made more sense to go against the rules. That it was eventually safer from their perspective.

This example outlines that, when it comes to occupational health, workers do not necessarily make choices to preserve their own health first. I would be tempted to write that workers almost never prioritize their own health when it comes to occupational safety. Damien Cru, a consultant in occupational risk prevention in France, nicely summarized this idea as follows.<sup>20</sup>

*What is the first risk for a worker? To fail at work doing their tasks as they want, quantitatively and qualitatively. And the second risk? To lose their job, which depends on the first risk, when workers do not meet all demands at work. And then? It depends: not learning anything, getting bored, going crazy, being isolated, being confrontational with the others, or home late to go grocery shopping or to the daycare. The risk of health impairment for the worker comes way after a long series of risks that are identified by a worker.*<sup>21</sup>

We, as occupational health specialists, may tend to wrongly think that, as our own priority is the occupational health of workers, such workers would naturally espouse our cause. Interestingly, workers often fail to meet our own interests as occupational health professionals. They mitigate our own professional priority (their own safety) with other considerations unrelated to their safety (that we may consider secondary as occupational health specialists). How dare a worker give more priority to being honked at rather than complying with the safety rule established for their good! How dare they remove protections in workplaces, which take a lot of time to assemble, to meet the productivity requirements that were literally yelled into their face at the morning briefing! How dare they hide a medical condition that is going to make them unfit in their work, losing their salary and making them unable to pay the mortgage that doubled over the past year!

20 Cru D. *Le risque et la règle, le cas du bâtiment et des travaux publics*. Collection Clinique du travail. Editions Erès, Toulouse. 2014.

21 Translation from the author, from the French: « *Quel est le premier risque du salarié? De loucher son travail, de ne pas réaliser sa tâche comme il le souhaite, en quantité, en qualité. Et le second? De perdre son emploi, risque lié au premier de ne pas réussir à concilier toutes les contraintes qu'il rencontre. Et puis après? C'est selon, ne rien apprendre, s'ennuyer, devenir fou, s'isoler, s'affronter aux autres, ou encore risquer de quitter trop tard pour faire les courses ou arriver à l'heure chez la nourrice. Le risque de perdre sa santé pour le salarié vient bien après toute une série de risques qu'il importe de permettre à chacune et à chacun de dire* » (p. 17, *ibid*).

## Lift With Your Legs, Not With Your Back!

Hence the education. Occupational health is a pamphlet field. There are thousands of documents of all sorts, videos, printouts, or downloadable pdfs about any occupational health topic. It is quite common to think that “*education is the key.*” If it is the key, this means that you think the root problem is a lack of skill or knowledge that can be rectified through proper training. There are many fields where one thinks workers can be educated. We can train them to wash their hands, wear their personal protective equipment (PPE), or manage their stress (we will get back to that one later). One problem is that a significant proportion of whatever is written on these pamphlets is not evidence-based. There are many beliefs about occupational health and safety that are not proven to be true.

You likely have heard that you should “*lift with your legs, not with your back.*” That is also what Gabriel Fernandez thought. Gabriel has been another important figure in my career. Right after my residency, I was considering a career in the private sector, as I did not find my experience in public hospitals that great. Up until that time, all my life I had been willing to serve in the public sector, which provided me with education and health. I could not see myself elsewhere but working for a public institution. Over the course of these four years of residency, I ended up thinking that I might better go into the private sector and work in an inter-company occupational health service, for instance. For my own work-life balance. However, it was Gabriel Fernandez who reinvigorated my motivation. One day in 2013, we were having a coffee at the coffee shop *Les Ursulines*, located right in front of the Conservatoire National des Arts et Métiers, where I took my work psychology courses. There, he encouraged me to take a position in a university hospital. I ended up taking my first job at Brest University Hospital, in a wonderful team for five and a half years. That’s crazy, how you can make a life-changing decision over a cup of Moroccan mint tea on a café patio!

Gabriel Fernandez was an occupational medicine specialist in France. At some point in his career, he was working at Paris city occupational health service. It was basically the same sort of job that Chantal was doing in Angers. Looking after city workers, but in Paris. He had also spent some time working with street cleaners, and he explained this in a book he wrote in 2009.<sup>22</sup> Some of them were complaining of lower back pain. He looked at them working. He realized that after the closure of a farmers’ market, most of them were picking up empty boxes off the ground by bending their back. Not their legs. He even filmed them, and showed the video of them working, so they could realize that they were not following up

---

22 Fernandez G. *Soigner le travail: itinéraires d’un médecin du travail*. Collection Clinique du Travail. Erès, Toulouse. 2009.

the good advice they were provided with. Everything went well for Gabriel Fernandez. Up until one worker, who was silently watching the video, challenged him: this worker used to be a sports trainer and said that bending the knees is more costly to the body than bending the back. To solve the issue, Gabriel offered to go working with them and be filmed as well. Collecting the boxes after the farmers' market. He was confident he could prove them wrong. He then looked at his own video and realized that things did not go as well as he thought.

*We could see me bend the knees at the beginning of the clearing, then bend the back more and more as the work progressed. I could not be assertive anymore that bending the knees was preferable to bending the back to do this clearing task, although [the] biomechanics of lifting could have helped me demonstrate it was better for the spine and to prevent muscular pain. I was able to recognize that it was less demanding for garbage collectors to do what was theoretically the worst for their back. Experience was challenging theories.*

Since that time, further research in this field is now crystal clear. Training workers to lift things is basically useless. You can certainly train them to operate a crane, or a lifting device to move a patient from their bed in hospital. But providing manual material-handling advice does not reduce the risk of lower back pain.<sup>23</sup> It is very risky for an occupational medicine specialist to try to educate a worker who has many years of experience, someone who has been able to keep their job for many years, sometimes in the rain and snow, and telling them that we know better.

It is easy to overestimate the power of education when it comes to prevention. For instance, putting prevention messages on cigarette packs is not very effective. It has been shown that such labels have little influence on tobacco sales.<sup>24</sup> The effectiveness of messages on cigarette packs does not work through a cognitive loop, but through a loop of negative emotions. Aviel Goodman provided the key criteria for addictions, including the “*continuation of the behavior despite knowledge of having a persistent or recurrent social, financial, psychological or physical problem that is caused or exacerbated by the behavior.*”<sup>25</sup> People with an addictive behavior precisely continue their behavior, despite being informed about the

23 Verbeek JH, Martimo K, P, Karppinen J et al. Manual material handling advice and assistive devices for preventing and treating back pain in workers. *Cochrane Database of Systematic Reviews* 2011; 15(6): CD005958.

24 Peters E, Romer D, Slovic P et al. The impact and acceptability of Canadian-style cigarette warning labels among U.S. smokers and nonsmokers. *Nicotine and Tobacco Research* 2007; 9(4): 473–481.

25 Goodman A. Addiction: definition and implications. *British Journal of Addiction* 1990; 85: 1403–1408.

risks. More generally, it is not sufficient to know about a risk to modify one's behavior. This is true for drugs. It is true for mental health in general (try not to be worried when you are worried). It is true for occupational hazards: the decision-making process for workers takes into account many other elements.

All in all, we occupational health professionals should constantly challenge the kind of commonsense advice that we give to workers, sometimes in a very paternalistic way, and not always evidence-based. We must be mindful that their own health is not necessarily their top priority. Even though we are obviously here to inform them and give them our expertise, we need to acknowledge that they are unlikely to view their own situation entirely as we do. We must respect human differences, instead of trying to have them share our one right view. It is on the occupational health and safety professional's side to grasp this idea. No matter what they say, people do not experience their own lives in silos (health on one side, other considerations nicely organized on the other side, with the health silo being the first one). We cannot think that if workers fail to understand that health should be their priority, it is just because of a lack of information. That a pamphlet will do the trick. And that if they eventually fail to understand that, it's because they are just a little dumb. Dealing with occupational health is also respecting that workers have other views than specialists. They may disagree, once and for all. Occupational health professionals should work around this, rather than believing this general issue is solvable with a tiny bit of education.