Chair

I'd like to welcome Professor Craig Jackson. This is going to be a first for us Craig, because we've had academics on here before, we've had scientists on here before, we've had researchers and public lecturers, but as far as I'm aware we've never had a poet on board as well. You truly are renaissance man, I think. Craig is currently Professor of Occupational Health Psychology at Birmingham University, and he's also head of the Psychology Department, and he's here to talk to us about fatigue and personality types, if I'm right. Over to you, Craig.

Prof. Craig Jackson

Thank you very much. It's probably the last time you're going to have a poet here as well, I'm under no illusion. I will spare you any bad teenage poetry, don't worry about that.

Obviously before we kick off thank you very much to Emma and to the organising panel for inviting me along, it's really nice to come here. I've literally just left an award ceremony back at my university where our psychology graduates have just been given their prizes for their dissertations. The best dissertation was by a young man called Sam; it was entitled 'The Apollonian and Dionysian reasons why working in a call centre kills your soul'. So clearly heavily loaded, but the future is in their hands; we wish them luck.

So what I wanted to talk about today within the space of 30 minutes is about the issue of fatigue, because it's one of those issues that I think we A) kind of misunderstand a little and B) we tolerate it more, or its presence, more than we perhaps should. Just before I trot on any further could I just ask you to – at the risk of embarrassing yourselves – just reveal amongst you who are the psychologists? Who would say they're psychologists here? We've got one, we've got two, three. Good, good. I thought I recognised a few of you. The rest of you presumably have proper jobs and real occupations! Okay.

Just a little plug at the bottom there, if you do want the latest hot gossip from the world of occupational health, and or safety, if you Tweet and go to Workplace Prof, that's me, I'll give you plenty of gossip that is not legally actionable because it's on the internet, so do feel free to follow along.

Okay, so we're talking a little bit about the role of personality and how that impacts on fatigue. And we might as well dive right in and talk about how personality clearly influences our perceptions. Without thinking about it too much, and without conferring with your neighbour, imagine the scenario. You get an text message Friday afternoon from your boss, why your boss should have your mobile phone number, that's your first mistake, but let's imagine he does have your number, he texts you, and your boss says, "Hi, I need to see you first thing Monday. It's important. Try to enjoy your weekend. Boss."

Without thinking too much how many of you in this room with a show of hands would think that clearly you're in trouble and Monday is not going to be good for you. How many? Wow! That's about 70% of you. Clearly guilty consciences each and every one. Presumably the rest of you would think, good thing, I'm going to get the pay rise or the promotion that I clearly deserve, and I'm going to get the recognition. Who actually thinks that it's a good thing? Three of you. Four of you. Five of you. Ye gods! Six of you. Clearly there's a small minority amongst you who haven't got the balls to commit to either option! Not only is that where that example falls down, but this is where binary psychology falls down.

Psychology has, for many years, used the example that you're one or the other; you're type A or you're type C. You're an extrovert or you're an introvert. In this case you're a negative affector or you're not. A negative affector is a personality type which we'll possibly describe as an extreme pessimist. So some people are optimists, some are pessimists. A negative affector sees the negative in everything. So if you told them they'd won a small prize on the lottery they'd moan about having to go to the newsagents to collect the cash. Everything has a bad side. The idea, of course, is that you've all seen the same stimuli, same words, same characters, same punctuation, but some of

you have perceived it as a good thing and some of you perceive it as a bad thing, and some of you didn't know what to make of it at all.

So it makes a couple of points; your personality clearly curries your perception of what you see, but also the idea that binary psychology of black versus white doesn't account for everybody. And this is why we've got a bit of a problem. We know that in health and safety, unfortunately whether you like it or not the biopsychosocial model is here, it's been here for about the last ten, 12, some would say more, years, and there's no way we can really get around it at the moment. Everything you want to look at in health and safety has some element of psychology in it.

I was speaking with a CEO from a large company a couple of years ago in a conference in Rome and he summed it up very well. He said that when he wants something doing he asks for a show of hands because all he wants is a pair of feet, or a pair of hands, to do a job. But nowadays when he asks for something to be done he gets the hands and the feet, but he gets the brains as well. And he doesn't want the brains and the personality and all the gooey stuff they bring with them, he just wants the feet or the hands. And that sums up where we are with psychology, the biopsychosocial model has infiltrated and penetrated health and safety. Obviously it means a lot of psychologists are on big fat consultancies, it doesn't necessarily mean they do a lot of good.

So one of the problems we have with fatigue, of course, is that we do get quite apathetic to it, given that we are all overworked and understaffed and we're doing jobs for other people, and people don't get replaced in organisations, we are going to become tired and we do seem to now accept fatigue as the norm, and we accept tiredness as the norm. We accept an inability to concentrate as the norm. We were just talking a few moments ago about Professor Cary Cooper, now in Lancaster. He came up with an idea a few years ago called 'adult attention deficit hyperactivity disorder' – and adult version of ADHD, you know, attention deficit hyperactivity disorder, where little children, some think they're just bad, some think they're mad and they misbehave. Cary Cooper came up with the theory, and it's not been proven, the theory that many of us take that into adulthood and we can't concentrate

because we're bombarded with so much at work and we're so fatigued as well. So there may be some sense in it. But we certainly seem to accept fatigue more than we used to and more than perhaps we should. Example there obviously of the British Midland crash in '89, a Boeing 737 400 crashed near Kegworth. We know that after it was investigated, and maybe some of you had a hand in that investigation panel at the time, we know that training was to blame, we know that ergonomics were also at fault, and we know that systems read-outs were also at fault. But fatigue is the core problem within many disasters when you have perfect storms. It doesn't matter how much training you have or what systems or what processes you have, or whether people are good reactors or they're good processors, whether they can see the hazard coming sooner than others, that's all dependent on their level of fatigue, and fatigue determines whether people see the hazard coming or not, it determines how soon they might spot that hazard, it determines how quickly they react to that hazard, and it determines if they take the correct reaction to the hazard.

So all the systems and processes and training in the world won't help you if your operatives have got this fundamental core fatigue. So that's how crucial I see it being.

And let's not forget pilots are one of the most technically competent, highly trained and consistently monitored occupational groups in the world, second only to astronauts, and if they suffer from fatigue then clearly the rest of us don't have much hope.

NASA, of course, one of the big agencies that have looked fatigue, and they had a longitudinal study, the Ames long term research programme, and they found that fatigued pilots and also military personnel, they broadened it out to other essential personnel who work shift systems, they found that these are the four main problems with fatigued staff, and obviously we can all relate to that in our own organisations.

Just as a little pause before we talk more about fatigue, we'll kind of go back to this idea of psychology a little and this old-fashioned binary idea of black

and white. The picture there, that's a chap called Howard Moskowitz, and some of you may be familiar with him. He's a psychologist but he very quickly got into the realm of marketing and advertising. And he used his psychological knowledge to make a whole lot of money out of food manufacturers and out of retailers. He's one of the gurus of packaging and promotion and shelf stacking. And in 1982 aspartame had just been invented, the artificial sweetener that I think is 102 times sweeter than natural sugar. And aspartame had just been invented and Diet Pepsi came to Howard Moskowitz and asked him to find the perfect concentration of aspartame in Diet Pepsi. Pepsi knew that it was somewhere between 8% and 12% concentration per can, but they weren't exactly sure where it was. They weren't sure exactly where that sweet spot was but they wanted Moskowitz to find what was the correct concentration of aspartame to have the perfect Pepsi, and that was their question. They offered him just over $1.2 million in stock if he could find them the perfect Pepsi. So he did what most psychologists would do, and most social scientists would do, he made up huge batches of Diet Pepsi, each with a different concentration of aspartame, 8%, 8.1%, 8.2%, all the way up to 11.9%, 11.10%, 12% concentration of aspartame, and he tested it on hundreds and thousands of willing individuals, and they all rated how nice they thought the Pepsi was. So what you've got here is a very simple plot, concentration of aspartame along the bottom, tastiness going up the side, and what Moskowitz imagined, of course, is that you'd find something like that; that people wouldn't like it too sweet, people wouldn't like it if it wasn't sweet enough, and 10% would probably be the literal sweet spot.

After eight months of doing trials he looked at the data and it was all over the place. The data was everywhere; there was no pattern such as this, as he imagined. So he went back to PepsiCo and he gave them their stock options back, $1.2 million, and said, "I can't tell you what the perfect Pepsi is, it can't be done." And he spent the next two and half years thinking about it, went back to them, they were very eager to find out the result, they were going to get the magical formula, but all Moskowitz said to them, because clearly he didn't need the money any more, he just said, "You asked the wrong question. You asked me what concentration makes the perfect Pepsi. No such thing. You should have asked me what concentration makes the perfect Pepsis,

because there is no one perfect Pepsi. We all like different styles of Pepsi." That of course is why we now have Cherry Pepsi, Diet Pepsi, Pepsi Max, Pepsi Caffeine Free, to cater for everyone. So why have 50 different varieties of Dolmio Pasta Sauce, extra crunchy, extra garlic, extra smooth? Because there is no simple binary model of what's good and what's bad, pasta sauce or Pepsi.

So we have this new individual psychology. And at the moment real world applied psychology hasn't taken that on board. We're still talking about these binary models, sweet and sour, salty, whatever the opposite of salty would be, I can't think of the word right now ((misiami 12:52?)), but we need to get more into the individual variability of psychology rather than these crude binary distinctions.

So when we talk about severe fatigue clearly I'm not talking about chronic fatigue syndrome, okay? So I'm not talking about CFS, we're not talking about myalgic encephalomyelitis, not interested in that at all. We're talking about fatigue as a severe form of exhaustion and burn-out, either psychological or emotional. At any one time about 3% of the working population have got fatigue, and of course you'll probably remember from a few years ago the term burn-out was very popular, again our erstwhile friend, Cary Cooper, did a lot of work about burn-out. Can anyone remember which was the occupational group that suffered from burn-out more than any other?

Bankers?

Bankers? You wish, sir, you wish. But no, not bankers, no.

Doctors?

Doctors, kind of, but there was an occupational group that had it even worse. No? Teachers of course. Teachers were **the** big group, the educators. They were stressed, they were strained, they were tired, they had no option but to keep going on and going on, because they were highly committed, they took work home, they prepared at home, they worked far longer than they should,

they didn't rest as much as they should, and they eventually suffered burn-out. I have to say that burn-out has now sort of disappeared from literature. People don't talk about burn-out as much, and we don't have studies called 'an evaluation of burn-out in bankers or in doctors'. The problem is still there, but we've become so acclimatised and accustomed to it that we don't really notice it any more, there's this thing called burn-out. But we certainly know that extreme fatigue occurs more in those who are psychologically 'vulnerable', and obviously vulnerable is in quotes because I don't want to annoy anybody and make anybody feel slightly defensive. And it's those vulnerable people who are working in conditions that they find stressful are the ones who suffer from fatigue. And hopefully that's where the element of personality comes in. Just so you know, by the way, that was a picture of Steve Jones, the DCI from the Joanna Yeates murder investigation. He'd been working there 27 days solid when that photograph was taken; you can see he was completely collapsed in his hands.

So when you've got staff who are suffering from fatigue, or extreme fatigue, extreme tiredness, burn-out, none of these things on the screen will protect that member of staff, no matter how much training you've got, experience, motivation or professionalism, you will succumb to fatigue, it will always catch up. But of course some people do feel fatigue quicker than others, and again it tends to be those with the personalities that we will say are 'vulnerable' or weaker personalities, and it's those individuals who are more hardy, more resilient and tough, who can go a little longer. Fatigue will get everybody in the end, it's a great leveller, but there are certain differences in who can sustain it a little bit longer.

I do a lot of work in the upstream oil and gas industries and your oil worker is a fantastic example of your hardy individual. Does anybody work in oil and gas in here? A couple of you. You'll know that your typical oil worker is the guy you want in your organisation, rough, tough, they don't take any mucking about, straight talking, and they can work extreme conditions very, very well. They've got what we call, psychologically speaking, hardiness. And you can measure hardiness on a questionnaire. So hardiness is a really good psychological personality strength that you want in your organisation.

Just three flights there, Arkansas ’99, Guam ’97, and New York ’90. These are all major civil aviation accidents, and the National Transportation Safety Board in America found that fatigue of the crew, particularly the flight crew, were the main causative factor in all of those major crashes. So again I’m focusing a little bit on the aviation industry, but they’re a good example to us all.

You’ve probably come across this before. This is the – I have to be very careful with my words here – this is a very short psychometric test, it’s only 11 items long, so it’s very short, it fits on one side of A4, and it’s known as the chronic fatigue scale 11. Has anybody heard of it? Maybe some of you have used it? No? That’s quite refreshing. Although it’s called the chronic fatigue scale it doesn’t measure the condition that we know as chronic fatigue, it measures severe fatigue but if it detects it over a six month period it labels it as chronic fatigue, but it doesn’t measure chronic fatigue syndrome. Does that make sense? No? Good, okay.

So, we’re measuring physical and psychological fatigue, not this mystery thing called chronic fatigue syndrome but it’s a fantastic little tool, and I would stake my reputation on this. Devised by Trudie Chalder and colleagues in the early nineties, it’s very cheap, it’s very reliable, and it’s highly predictive of staff who will succumb to fatigue or other health problems and who will go off sick and who will also go off longest. It’s a highly predictive psychometric tool. All that in 11 questions. Now the way I’m ranting on about it I swear to you I don’t have any financial, or any interest in this whatsoever, I get no kickback for this, it’s just a tool that I have found over the years very reliable, quite valid, and highly predictive of human behaviour.

The first six questions are physical. I’ll read a couple of them out. It says, ‘do you have problems starting things?’ And there are four answers for each question, going from left to right, and the further right you go the more symptomatic you are. So do you have problems starting things, you’ve got one of four options, ‘less than usual’, ‘no more than usual’, ‘more than usual’, ‘much more than usual’. So the more ticks the respondent puts to the right of the screen the more fatigued they are.

Question two says, ‘do you need to rest more?’, ‘less than usual’, ‘no more than usual’, ‘more than usual’, ‘much more’. Questions eight, nine, ten and 11 measure psychological fatigue, so things such as do you have difficulty concentrating, how is your memory, do you make slips of the tongue when speaking. And again it uses this gradual, symptomatic scoring option.

Obviously it’s highly portable, it’s a pen and a paper, you can do it online, you can do it on Facebook, you can shove it under people’s noses. It takes less than two minutes for an individual with an average reading age to complete. And there are a couple of ways of scoring it, and I won’t go into too much detail but one of the ways of scoring it is clinically incredibly useful. We have a little dividing line down the centre and every time a person puts a tick to the left of that dividing line we don’t bother, and every time they put a tick or a cross, whatever they use, to the right of that dividing line on the more symptomatic side of things then we give them a point, we score them one point. So the individual here we’ve got completing the CFS, he’s scored two, three, four, five. We don’t care where it is on the right side of that line, we score each response to the right of that line with one, so he gets a score of five. The cut off point for the chronic fatigue scale is four, so if a person gets four or more responses on the right hand side of that line they’re classed as a case of severe fatigue. That is incredibly useful because then you can bifurcate people into cases or non cases. Now I know it sounds very simplistic and I’ve just been railing against binary psychology, but there is also a more sophisticated linear way of scoring this test, but we don’t need to go into that today.

I’ve used that awful phrase there, ‘risk analysis of the mind’. But if you were going to do a dangerous process in an upstream oil station you’d test your equipment, you’d test your vehicle, you’d test your tools. Why not test the mind of the operative as well. It takes two minutes and it could save an awful lot of bother. It gives you a definitive outcome that you can action; they’re either fit to work or they’re not fit to work. so it’s a very, very simple tool. Reference for it, Trudie Chalder. If you go to the web page that I gave you at the beginning there’s a link to that, you can actually download a copy of that in

pdf off my web page. It is public domain so you don't need to pay for it, I'm not breaking any copyright, but it is an incredibly useful tool. It also highly correlates with lots of other measures. It highly correlates with things like the GHQ, the General Health Questionnaire, the Brief Symptomatology Index, and other quantitive measure of health or ill health you can think of, this correlates very highly with it. We'll come back to some scores using this and a bit of research I did as we plod on.

This was from, without going too much into the detail, a cross sectional study that a colleague and I did using budget airline pilots. Did anybody fly to get here today? A show of hands, anybody who flew to get here? That's just showing off, we're in Birmingham, we have all the motorways in the world! Okay, so a few of you flew here today. Did any of you fly here with budget airlines, and it's no shame if you did, don't be embarrassed. So those of you who flew here today, you flew with a budget airline? This was a piece of research we did in Occupational Medicine a few years ago on Ryanair pilots. And we did a very simple test of Ryanair pilots, we measured lots of things, but we measured their physical and psychological fatigue using the CFS that you've just seen. They didn't know we were measuring their fatigue, we dressed the survey up as asking their opinions about flight time limitations and other issues about budget airlines. And you can see here very highly correlated are the fatigue scores for psychological fatigue and physical fatigue. So as you become psychologically fatigued you become more physically fatigued and vice versa.

Interestingly, when we published that study in Occupational Medicine we got a little bit of publicity about it and then one evening about six o'clock the phone in my office went and it was Michael O'Leary from Ryanair, and he'd called me up. And he was sort of shouting down the phone at me about how rubbish my study was, and I said, well it's been published in the medical journal, Mr O'Leary, that's usually good enough for most people. He ranted a bit more, and then he sort of said, "It's a cheap internet-based survey of a couple of pilots done at schoolboy level." A bit harsh, I thought. I then said to him, "If you were to give us £50,000 we'll do a really good piece of research of your staff and we'll still find the same thing." At which point the phone went click

and I never got the money! But you know you're doing something right when you hack off the CEO of the organisation. I am now actually banned from flying Ryanair, I'm very proud of that! But given that 82% of their pilots suffer from fatigue I wouldn't want to fly with Ryanair. And that isn't actionable, by the way, I've had that checked. That's not actionable.

Okay, so attitudes and beliefs then. When you've got a load of fatigued individuals, and again not everybody who is fatigued has the insight that they're fatigued, it's a bit like stress, whether you believe in it or not, not everybody who has stress knows they've got it. And some of the really extreme stress cases who I get to see think they're doing very well, but they're not doing very well; you just ask their boss or their colleagues or their kids or the pet dog. Daddy's very grumpy but he doesn't have the insight. Fatigue's very similar. And there does seem to be this cruel paradox that the more you become fatigued the less you are aware of it, and it's other people or accidents or near-misses that point it out to you.

Anyway, we found some behavioural or personality factors or attitudinal factors related to fatigue. I've got there – I've actually mistakenly called it Obs Ratios, and I shouldn't. Technically it's a Prevalence Ratio, for those of you who are statistically minded. A very similar thing. What we essentially want to show there is that, quelle surprise, if you are a worker or you have a worker in your organisation who is concerned about fatigue, worried about fatigue, then they are 11 times more likely than a non-concerned member of staff to suffer from fatigue, as measured by our chronic fatigue scale that we used.

Now that kind of makes intuitive sense really, doesn't it? And we don't really know if it's the chicken or the egg. A couple of other things. If people believe their fatigue is worse now than it was a couple of years ago they're ten times more likely to suffer from fatigue as an individual who doesn't believe it's worse. So again these are kind of fairly intuitive.

We've got this thing of discretion, and this is very important; this is one of the main finding that I want to get across today, is that when you give staff the option to take work home or to work in the evening or to stay late or to come

in early to work on something, those staff who are keen enough and career minded enough and conscientious enough to do it and to work in their own time, no surprise, they are the ones who are more like to suffer from fatigue.

Again a quick show of hands, in the room how many of you routinely take work home? Ah, it's the curse of the professional classes. I'd say that's about 70% to 75% of you. We just accept it of course, we do it, it's part of getting the job done; you take home reports or marking or figures, and it's just done. And of course it's all done in the name of work/life balance, of course. This big buzz phrase, work/life balance. How many of you are able to take your hobbies into work? How many of you take your kids into work regularly? Exactly. So work is very happy to go home and invade your home life, but organisations aren't very happy that you take your hobbies or your pastimes or your sex life or whatever, and do it in work's time. So it isn't really a balance; it's a bit of a con.

So discretion. When you've got workers who are very keen and go-getting and want to get things done, they're the ones who are likely to put themselves at risk of fatigue. Other little things we can see here, if they use discretion most recently on their last shift or on their last project they're more likely to have fatigue, about three times more likely. We also found that being male is actually protective against fatigue, and it seems to be you're at a greater risk of being fatigued if you are a female, particularly a female who does use discretion in overloading themselves with work. Again, it could mean nothing, it could mean everything, it was just a quick and dirty cross-sectional survey.

Does anybody know this individual? He might be in the room actually, better be careful. This is Paul. Paul in here? No. Good. Paul will sell you – again this isn't actionable either, this is fact – Paul will see you the MetroNap system. If you have staff or people in your organisation who are fatigued you can buy one of these MetroNap systems for a few thousand pounds and you can see there, it works. Napping improves alertness, productivity and mood. Researchers recently discovered a nap a day can also decrease chances of dying from heart disease by 37%, and that's found from a research with Harvard School of Public Health. You've probably seen him at the NEC at the

Health and Safety Expo selling these MetroNap systems. It's just a nice, comfy leather couch with a hood, a canopy that comes down over you, some flashing lights, and you can plug in your iPod and listen to whale music or pan pipes or whatever for 20 minutes. If you want to spend a few grand on dealing with fatigue, absolutely fine, and I applaud you, your company's clearly doing well. There is an alternative, which is that. Two chairs. We didn't have money to spend on a MetroNap system, me and my colleague, (Catcher 30:40?)) Christiansen, so we got two chairs and we got 250 night nurses in a Danish hospital and we split them into two groups, of course as you would, one group gets a power nap in a night shift, the other group doesn't get the power nap in the night shift, and after a few months we measured their wellbeing, their fatigue, mental health, the usual malarkey, and, quelle surprise, as you'd expect, the nurses who had the power nap every night, and on average it was only 18 minutes, an 18 minute nap every night shift, they were significantly less fatigued, significantly happier, significantly fewer mental health problems, than the nurses who didn't get a nap.

So napping clearly does work, but you don't need to spend thousands of pounds on it, okay. Obviously you've got to risk assess any room where you have people sleeping, especially on continuous processing and night shifts, but there are cheaper common-sense solutions.

Wouldn't be a psychologist without a model with lots of arrows. Without over-egging the pudding too much, basically fatigue is more likely to happen to people who are faced with these hazards, of course, and have these particular contributors or modifying factors. And of course these are psychosocial and lifestyle factors. So we've got the hazards, we got the workplace hazards, then we've got the modifying factors of lifestyle, personality, alcohol, diet, exercise, neglecting yourself, and there if you've got the right ingredients to the perfect storm it will make fatigue more likely to happen in the vulnerable workers. The vulnerable workers being those with type A personalities, and again I know it's a bit crude and vulgar but most research, looking at personality type and fatigue, suggests that type A people don't do very well. They certainly don't do very well when they have no control of their situation. They do even worse when they lose control. So a type A

person may have control on a project, that control is taken off them or given to someone else, in fatigue terms they'll do even worse when they've lost that control.

Negative affectors we talked about before, this is a more sophisticated type of pessimism. Obviously individuals who have got physical health problems or a previous history of mental health problems, and again we're very pejorative with the term 'mental health problems', individuals who are highly anxious or hyper vigilant, possibly with a history of mild psychological trauma or PTSD, and we know that the hardy people are those who are quite tough. All of these things you can measure, very simple pencil and paper psychometric tests, type A, negative affectivity, people's physical health, people's mental health, anxiety, vigilance, and hardiness, all of those you can measure very cheaply and reliably in your workforces.

Good Lord, another one! Okay, again we're keeping it very, very simple, but we know that one of the main causes, of course, to fatigue is a heavy workload, made worse by shifts, made worse when people have to work shifts that they don't particularly want to work, but we know that you can adjust some of these factors, you can make people work shifts that they want to work, people can roster their own shift system. Qantas have done a lot of work getting pilots to pick their own shifts, and it wouldn't be the fail you expect where some pilots pick the best shifts and leave the crappier shifts for their colleagues, you get a very good collegiate spirit, and pilots will pick some good shifts but they will also pick the bad shifts because they know out of support of their colleagues that they've all got to take a bite of the – I was going to say something very rude then – they've got to take a bite of the unpleasant thing that's coming round.

So people aren't as selfish as you might think in some organisations and they do nominate to work the unpleasant shifts as much as the good shifts. Some things clearly you can't manipulate; people's age and their circadian tolerance and circadian rhythms, and we know that you've got these short term and long term outcomes. We've got the things that... you know, we've got acute insomnia, sleepless problems, wakefulness problems, clumsy errors and

mistakes, and we know that as that persists and becomes ingrained behaviours, people sort of work around it and their lifestyle makes them more accident prone, they get gastro-intestinal disorders, cardio-vascular problems. So really the trick of course is getting it at the acute stage before they move into ingrained behavioural problems.

I think it's the last arrow you have to tolerate, then we're away from the arrows. So these are all the things, of course, that you will know you can do to intervene in your workforce. Pick up on a couple of them, I'm sure none of them are new to you. CBT, yeah, where are we on cognitive behavioural therapy? A lot of people will sell it to you as the great thing, you know, brief CBT, cognitive behavioural therapy. The idea is, let's say, that you havean individual who's working shifts and he gets home in the morning and instead of going to sleep he probably stays up, has half a bottle of whisky, has a big breakfast and watches daytime TV, feels sleepy about three in the afternoon, only gets a couple of hours sleep because of the noise and the environment and circadian rhythms, and then he has to be up a couple of hours later to go to work. If that individual is living his shift pattern life like that there are going to be problems for him. The idea is that you get him in for a few sessions of CBT with a psychologist or a counsellor and they can work on his beliefs about why he can't sleep or why he shouldn't sleep or why he doesn't want to sleep in the day.

It's a lovely theory, in practice CBT, but it's a little bit too simplistic. Cognitive behavioural therapy doesn't work for everyone, and some people shy away from saying this but I'm going to have a go at it anyway. It doesn't work very well for thick people. Okay? There's no easier way of putting it, okay. We can dress it up and talk about cognitive deficits and yah di dah di dah, but if you have an individual who has to sit in with a therapist and the therapist's whole aim is to get that individual to reflect and think productively about his or her lifestyle choices, it isn't going to work for everybody. Some people need a form of therapeutic intervention where they're told what to do. They need an occupational health adviser or a nurse or a physician saying, you should do this. Not everybody has got the intellectual ability or freedom to work it out for themselves.

Also a lot of cognitive behavioural therapy hasn't been evaluated in a particularly rigorous way, and a lot of the research using CBT to change workers' lifestyles that I get to review for journals is pretty much flawed, and it isn't particularly good science. So I'm a little bit sceptical about CBT as this miracle, quick intervention that some people sell it as.

Hypnotherapy, on the other hand, is fantastic. We've had it for hundreds of years. And it does work, and lots of research shows that hypnotherapy is just as effective, if not more, than CBT. But nobody wants to go there because it's like voodoo and we're scared of it. How strange!

Right, so, how are we going to beat fatigue? Well a couple of simple examples, one thing of course, when you've got people on the road, break up the road. The road is really the road, and we've got a paper coming out in Occupational Medicine in a couple of months where we've reviewed the health effects of people who have to work remote or isolated jobs, where they're on the road and away from their HQ, and the review of the literature basically says, we don't know what the problems are, but we're pretty sure there's ergonomic, muscular-skeletal, psychological and dietary problems for people who spend a lot of time on the road. And then of course they run the risk of sleepiness and falling asleep at the wheel. One thing you can also do is make driving harder. We've made driving too easy, so easy that any old fool can do it. We don't want that, we want to get the idiots off the road. So why don't we make driving harder? It makes sense. I don't mean make the test impossible so that only 5% of the population drive. I mean make the task of driving harder. So at the moment you can sit behind the wheel, thunder along at 90 miles an hour, and go all the way up the M6 to Scotland, without really having to do anything. If every couple of minutes a buzzer went off and you had to press that buzzer otherwise the engine cuts out, that forced alertness makes you pay attention to what you're doing.

And there was a lovely research team from Glasgow University who looked at the possibility of making driving harder to make it safer. And they published their results and they got absolutely slated by the media, particularly the Daily

Mail of course, because they thought they were trying to increase accidents on the road. But if you make driving harder you make it a wee bit safer.

Getting people to eat better, eat healthier, stay awake, it really does make a difference. Drinking more water, I know we all worry about dehydrating, we've all got bottles of water with us, but really you do need to drink more water, particularly if you're out of the office and on the road.

Try and take over; there will be some people who will work themselves into an early grave. You know, the term 'workaholic' actually has a positive connotation, doesn't it? When you go speed dating you won't say to this person you're trying to impress, "Oh, I'm an alcoholic, ooh, I'm a wife beater". These are bad things, very bad things. But you can say, "Ooh, I'm a bit of workaholic," we think that's good. He likes to provide, he likes to be active, he likes to be earning a wage. But workaholism isn't researched enough. There was a lovely little piece of research done in Dublin City University about the origins of workaholism, and how workaholics view themselves and their families. We don't really know enough about it. But if you let people choose to work themselves to death, they will. So it's the conscientious hardworking people, young career people who want to impress that you've got to put the reins on and slow them down for their own good.

Self rostering and self fostering of shifts. Get people to pick their shifts, and pick it with a collegiate spirit also helps. And, again we've got to be very careful because of the Discrimination Act, but if you can stop them getting into the organisation it's easier than trying to get them out once they're in. Okay? I'm going very careful how I'm picking my words. At the moment if you were to use pre-employment screening and use that pre-employment screening as a reason not to employ an individual because they have a certain personality type or they have a certain personality trait, that would not fall foul of the Disability Discrimination Act on current legislation. At present being a type A isn't a disability. It is for some but it isn't a registered disability. So you can use psychometric screening to wheedle people out, and it's for their own good. You don't want anxious people coming into a stressful job that will make them worse.

One thing I've learnt as a psychologist is that the best predictor of future behaviour is past behaviour. And if you've got someone who's gone off sick and they were off for six months because they got scared or they had a paper cut and they took all the advantages they could, and they finally went back to work, if they were successful and rewarded for that they will do it again in the future, because they've been reinforced and rewarded. So past behaviour is the biggest predictor of what people will do in the future.

That's enough ranting and tub thumping from me, I think. I think at that point I'd best shush, before I say anything actionable! Thanks.

Chair

Thank you very much Craig. Have we got any questions for Craig.

Prof. Craig Jackson

Or you can just tell me to shut up if you prefer. Stop ranting!

Chair

Several years ago I did research for the British Airline Pilots Association looking at stressed airline pilots and the interaction between stress at home and stress at work, and how the two interacted. Two things happened, I was an army officer at the time and I recognised the same sort of symptoms, but of the 350-odd pilots I interviews I think about 70-odd% of them admitted to me that there are times when due to stress and due to fatigue they shouldn't have been flying!

Prof. Craig Jackson

Mm, but they're the kind of occupational group that are very goal-oriented, they push themselves, and if you let them fly into discretion they will.

Chair

Absolutely. Well thank you very much indeed, Craig, thank you very much indeed for your contribution.

Prof. Craig Jackson

Thanks very much.