



The ICI Report on
the Secrets of the Senses
In association with
Oxford University



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The ICI Report on the Secrets of the Senses is the first ever study to bring together the best of current thinking and to provide a unique insight into why we should view and stimulate the senses holistically

At ICI, understanding the senses is at the heart of our future business. Our insight into the senses, in support of our customers, drives developments that enhance the sensory experiences of people all around the world - from taste and sight through to touch and smell.

It is by getting closer to the consumer that we are able to create imaginative solutions to the challenges of a modern lifestyle and to delight the senses. Over recent years ICI has changed, evolving from a more traditional chemicals business to a specialty business that stimulates the senses through the supply of ingredients for food, flavours, fragrances and personal care products, as well as decorative paints. ICI is increasingly being recognised as a vital ingredient in satisfying sensory needs.

It is clear that we experience the world through the medium of all the senses, and that multi-sense rather than single sense experiences are generally more memorable and stimulating.

It has been our belief that with ICI's broad capability across the senses, we will be able to create more value for our customers and consumers through a multi sensory approach, and we are engaged in a journey of exploration of this approach from a business and therefore technical perspective.

Our businesses have a longstanding tradition of scientific discovery and one of the challenges of today is innovation in the field of the senses. We are dedicated to exploring this new and changing frontier, and integral to this challenge is an understanding of people's needs and their desire for well being through enjoyment, comfort and performance.

It is therefore with enthusiasm that we gave our support to this important study led by Dr. Charles Spence of Oxford University. Dr. Spence is one of the leading experts in the field of experimental psychology of the senses and Oxford University is one of the worlds leading institutions in this field.

In our work with leading experts we have observed developments at first hand. 'The ICI Report on the Secrets of the Senses' is the first study to bring together the best of current thinking and provide a unique insight into why we should view and stimulate the senses holistically. Of particular significance is the conclusion of the need for a fundamental change in the way the senses are viewed, to provide the opportunity for a new way of living.

Dr. Spence describes this new approach as "Sensism" and we share his commitment to engaging the senses in a new way, to develop the products and deliver the lifestyles that will improve wellbeing for us all.

A handwritten signature in black ink that reads 'Brendan O'Neill'.

Brendan O'Neill
Chief Executive ICI

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Overview

The ICI Report on the Secret of the Senses indicates the need for a radical new way of looking at and understanding the senses. It leads to the conclusion that a holistic approach is vital, because together the senses produce beneficial effects that are far greater than the sum of their parts.

This new vision requires a descriptor, and that is 'Sensism'. Sensism promises change and by unlocking the 'secrets of the senses' we can increase our capacity for pleasure, love and success. These are the key ingredients of human wellbeing – and Sensism provides us with a potent recipe that will combine all three to genuinely improve our lives.

I am delighted to have been invited by ICI to work on this, the first ever study of its type to pull together the latest research on all of the senses and to consider them holistically.

Touch is not only essential for our wellbeing, but also for sensory, cognitive, neurological and physical development.



The senses are the key to our emotions, the source of our wellbeing – and taking charge of them can lead to a better life for us all.



sensism: taking charge of the senses

By unlocking the secrets of the senses we can increase our capacity for pleasure, love and success.



Regaining a sensory balance

A shift from traditional thinking on the senses should find fertile ground in a society increasingly seeking to satisfy its craving for sensory stimulation.

There is clearly an innate recognition that something is amiss. We have moved away from an outdoor, physical lifestyle to one in which we spend 90% of our time indoors. Although this makes life easier, it doesn't satisfy our basic need for a balanced multisensory diet.

Each day we are constantly reacting to a sensory assault. The home, the workplace, every new environment brings a host of new sensations. Yet by far the majority of these sensory experiences are visual.

With so much time spent indoors, it is surprising that we do not take more time to consider the impact of our sensory environments on our health and wellbeing.

Evidence before our eyes

We live in a visually dominant society, which has marginalised the more emotional senses of touch and smell. This imbalance impacts on our wellbeing in a way that has so far largely gone unrecognised.

While vision may be efficient at transmitting certain types of information, taste, touch and smell provide more emotional benefits. Touch is not only essential for our wellbeing, but also for sensory, cognitive, neurological and physical development. Yet there is less interpersonal touch today than ever before. The truth is that we are 'touch-hungry' and our bodies are craving more multisensory stimulation.

There is mounting evidence that this neglect, especially in the workplace, already affects our health. 'Sick Building Syndrome' is estimated to cost businesses millions of pounds each year, and can be attributed, at least in part, to our receiving the wrong sorts of sensory stimulation. It is also claimed that many of us suffer from mild forms of sensory deprivation, hungering for light as well as touch.

So what does sensism mean for us?

By considering everything from the colour of our walls, the ambient scent of our surroundings and the background music where we shop to the texture of the food we eat, we can deliver a truly multisensory boost that will make us more productive, more successful and able to enjoy better relationships – all fundamental to our sense of wellbeing.

The senses are the key to our emotions, the source of our wellbeing – and taking charge of them can lead to a better life for us all. This has implications for our understanding not only of today's world, but also of tomorrow's. From creating stimulating environments that increase our productivity and creativity, to healing our bodies and minds when the stresses of daily life become overpowering, Sensism has the power to change our society.

It provides an antidote to the pitfalls of modern living, many of which we don't even realise exist. This is, after all, a world in which 'touch-hungry' children, work related illnesses and a nature-starved lifestyle have become the norm. Sensism is a vital ingredient for modern living, and understanding this will lead to a paradigm shift in the way we plan for all our futures.



Dr. Charles Spence
Department of Experimental Psychology
University of Oxford

Sensism has the power to change the roots of our society.





Pleasure brings positive benefits to our lives. At its simplest level it brightens our daily existence, at its deepest it can mean a happy and healthy life, imbued with a constant sense of wellbeing.

The majority of life's most pleasurable experiences are multisensory, whether we are aware of them or not. These subtle multisensory cues drive our perceptions, behaviour, decisions and performance and it is to them that we should look to uncover the innermost secrets of pleasure.

secrets of pleasure

The drive behind self-indulgence is not hedonistic excess but an elemental and biological need, rooted deep within the body.

The science of indulgence: as important as the air we breathe
At the heart of pleasure is an often misrepresented need. Time and again portrayed as a vice, indulgence is in fact a fundamental necessity, a positive force fuelling our sensory development.

The growing craving for indulgence appears to be one of the most astonishing trends of recent times, a fad based on frivolity like a bolt-on fashion accessory. However, the trend for personal pampering is in fact much more than a passing fad, it points to something much deeper. The drive behind self-indulgence is not hedonistic excess but an elemental and biological need, rooted deep within the body, answering more central, intractable human needs.



Sensory deprivation is an ailment of modern society. While our visual senses overdose on information, the emotional senses of touch and smell are neglected. Indulgence and pampering provide the natural counterbalance. Hence to dismiss cosmetics as superficial fashion accessories is to ignore their ability to satisfy basic cravings for a multisensory experience.



If we unlock the secrets of the senses in our youth, we can crack a code that will help us to live a long and happy life of pleasure and wellbeing.



secrets of pleasure

The essential pursuit of pleasure

The craving to stimulate our senses - to reawaken and arouse our bodies and minds, is illustrated by the increasing importance we place on holidays, sensual foods and holistic treatments such as aromatherapy and massage. Yet mistakenly we often view the senses in isolation.

A focus on the whole provides a far richer sensory encounter than a focus on the component parts. Take, for example a glass of wine - we all recognise that it is not simply the taste of the liquid, but the depth of colour, temperature, aroma and feel in the mouth, which together constitute a sensory spectrum unparalleled by taste alone. Yet if just one of these elements is out of sync, the experience of the whole is compromised. This is a clear case of the kind of multisensory experience that can bring profound benefits to our health and happiness.

Pleasure and health: a coming of age

Healthcare is a field that has seen tremendous advances when it comes to multisensory methods and their manifold benefits. Holistic approaches have come of age, adopted in clinical settings and forming an increasingly central part of many therapies.

Only recently these 'alternative', 'experimental' or 'Eastern' approaches were considered beyond the realm of mainstream medicine. However, if developments continue they will soon become the status quo.

Relaxation is vital for treating patients suffering from anxiety-related disorders, and aromatherapy has applications above and beyond stress relief - even altering the perception of pain. Most importantly, the beneficial effects of massage and aromatherapy may be even more pronounced if all the senses are harmonised in a carefully orchestrated environment, such as a warm room with subdued lighting and gentle music. This is another clear example of the advantages of Sensism - a central biological necessity as crucial to our wellbeing as the air we breathe.

Sensism: a central biological necessity as crucial to our wellbeing as the air we breathe.

Making up for lost senses

Preserving pleasure is as important as our ability to stimulate it.

Throughout life our bodies - and senses - come under attack from every angle. In tandem, ageing, accidents and illness present different challenges to the effective management of the senses and as we grow older we encounter a sensory decline that can have detrimental effects on the quality of our lives.

Yet a better understanding of the senses means that decline is not something that we have to accept. We need to make up for lost senses by recreating diminished sensory experiences and resuscitating former pleasures.

Multisensory enhancement: the undiscovered country

Multisensory enhancement crosses the boundaries of the senses and has a unique ability to enhance one sense with another and even compensate decline. For example, have you ever wondered why putting on your glasses at a noisy party can help you hear better? Do the senses find an echo in the phrases "mind over matter" and "more than meets the eye"?

Sensory dominance and multisensory enhancement not only work together to make the senses more effective, but also play a crucial role in our perception of many experiences, especially for our enjoyment of food and drink.

This is well demonstrated when appearance and colour have a dramatic affect on our appreciation of foodstuffs. Adding red to strawberry yoghurt, for example, will increase the perceived intensity of flavour even on the tongue of a trained taster. In turn, tasters can be fooled into thinking they are drinking red wine by the simple use of colouring in white wine.

Colour can also create perceived sweetness, which is especially important for those on low sugar diets. Food scientists may soon be able to increase the pleasure we get from food and drink by carefully selecting the colour that best complements and enhances the taste and smell of particular products.

Multisensory enhancement has a key role to play in the arenas of science, medicine and commerce. It will provide hope for those with diminished senses and an exciting way forward for the products of the future.

The silver senses

Perhaps the major socio-economic global challenge of our time is linked with dramatic increases in life expectancy. With more than a billion people over 60 years of age predicted by 2025, the challenge to resources, economies and governments is becoming one of the great issues of our time.

With the growing prominence of the 'grey generation' come less visible but no less challenging sensory issues to face. For as we grow older our senses start to deteriorate and the changing demographics of our global society presents age-related sensory challenges that we have to address.

While auditory or visual losses can be corrected with the use of hearing aids or glasses, the decline of smell, taste and touch sensations pose a more serious problem in old age. Elderly people, for example, typically require 2-3 times more salt in their food to make up for loss of taste sensation - doing little for their health, diet or quality of life.

A growing understanding of the multisensory nature of food perception is leading to the development of novel strategies to compensate for the loss of smell and taste. Major scientific advances are being made in the quest to improve flavour through multisensory enhancement effects, as well as using visual dominance techniques to make foods taste better by looking better.

Critically, the increased use of flavour-enhanced foods can lead to an increase in the palatability and intake of food, as well as improving appetite, immune status and other aspects of health and wellbeing.

These endeavours are by no means only restricted to food. Making environments more stimulating for the elderly by using enhanced colour schemes, the increasing use of textiles, textured surfaces and other tactually rich objects in the home can stimulate the sense of touch and make up for the effects of 'touch-hunger'.

Summary

Throughout our lives we suffer sensory decline or loss, health issues or conditions that can affect the way we use our senses. But an appreciation of the decline and dominance of certain senses coupled with increasing innovation allows us to make up for lost senses.

Pleasure need not be the preserve of the young, nor does our zest for life have to diminish as we approach old age. There is a clear link between continued vitality and the instinctive understanding of the senses offered by Sensism. A multisensory approach to life provides the insight that means pleasure and our pursuit of it in the future will not allow a sensory friend to become a sensory foe. If we unlock the secrets of the senses in our youth, we can crack a code that will help us to live a long and happy life of pleasure and wellbeing.





Whether we're mastering the dating game or making a long-term relationship work, love is something that preoccupies us all. Both elating and frustrating us, it is an essential part of the human condition that has a phenomenal capacity to make us feel better and function more effectively.

As one of the most mysterious of our emotions, the secrets of love lie deep in the senses. Could greater understanding and application of Sensism help us to form healthier and more stable emotional relationships?

secrets of love & relationships

Worlds apart: do opposites attract?

So much of that which brings us together seems to be random factors based on chance. But when we say "we just clicked" it may have as much to do with sensory compatibility as rational thought.

Love, in fact, can be the ultimate triumph of the chemical over the rational. While love is widely considered to be a refined emotion unique to humans, it may have more in common with animal behaviour than we care to imagine.

Many animals announce arousal to an intended mate via a chemical signal emitted through the skin, and there is growing scientific suspicion that we subconsciously do the same. Evidence of this kind of chemical communication suggests that human beings do indeed have a 'sixth sense' when it comes to finding a partner. It seems that love, or at least attraction, is not a secret of the heart, but a secret of the senses.

In the past, society has often dictated that we choose a partner who slots neatly into our social group or satisfies us on an intellectual level. Yet such factors rarely guarantee a successful relationship. Even a partner who appeals to us visually may lack the secret ingredient that goes beyond mere appearance. Could embracing the mysteries of Sensism and thus giving into our 'animal impulses' help us to find true compatibility with a partner we may otherwise have overlooked?



Love, or at least attraction, is not a secret of the heart, but a secret of the senses.



Children may be growing up 'touch-hungry'.



Societal conventions work against our own biology and starve us of tactile affection.

secrets of love & relationships

A 'touch-hungry' generation

Insight into what makes us click is not enough to provide a successful environment for love and relationships. We also need to address the fundamental way in which today's society addresses the senses, to ensure that they are doing for our relationships what they are doing for our surroundings.

Central to this is touch, which plays a vital role in our emotional welfare. Yet in many situations today interpersonal touch is actively discouraged, and as a result many of us are suffering from a chronic shortage of touch known as 'touch-hunger'.

Given that the tactile component of our multisensory environments is vital for growth and development, we should be concerned that recent research demonstrates that children under the age of five at preschool nurseries in North America are, on average, touched for only 12% of the time, even in model nursery schools. Are our children growing up 'touch-hungry'?

Love needs touch to make it real, physical affection to turn it into a complete sensory experience. Without touch in our lives, the multisensory circle remains incomplete - we may hear that we are loved, but we need the holistic embrace offered by Sensism to truly feel the affection that we crave.

The shortage of touch we experience today may be having detrimental effects on our health and wellbeing. Loving relationships are, of course, not the only way of fulfilling our craving for touch. Massage, for example, carries a range of health benefits, from relieving tension to helping to reduce fatigue. This can even enhance the body's ability to heal itself, and often results in positive change in self-awareness and productivity.

To counterbalance the lack of touch we should think especially carefully about tactile stimulation in every environment. Surfaces made from natural materials are often preferable, as irregularity is far more sensual than clinically perfect surfaces. This needn't simply apply to the home since the workplace offers opportunities for tactile stimulation too. Office accessories, for example, could be designed in the future to soothe and relax.

After all, we all deserve to live and work in environments that are sensual to the skin, especially given that the skin represents the largest sensory receptor we have.

Enhancing the tactile environments in which we work can go some way in making up for the loss of interpersonal touch.

Sensuality: the battle of the sexes

Recognising the differences between ourselves and a partner can be the crux of a successful relationship - and Sensism can offer a clear means of understanding the true nature of those differences.

As we have already demonstrated we can tailor sensual stimulation for our needs, but can our needs ever be exactly the same as those of another? For instance, will the way we paint a room to promote relaxation ever have exactly the same effect on our partner as it does on us? Will one texture that stimulates our touch feel the same to another?

Although the majority of us are born with the same array of senses, we perceive the world in very different ways. Research shows that we all have different sensory experiences. Some of us, for example, can taste and smell things that others will never experience. Furthermore, there are a number of factors, such as age, genetic variation and previous experience that all affect how our senses develop.

How we perceive the world around us is also affected by our gender. Sex differences affect the perception of stimuli in all the major senses. But just who are more sensitive, women or men? Some may find the answers surprising.

For example, women can taste sweet, sour, salty and bitter stimuli at much lower concentrations than men, and also tend to outperform men on smell identification tasks. Women are also more sensitive to certain sorts of tactile stimuli and, what's more they feel them more intensely than men. Additionally women generally tend to perform better than men on auditory tasks, while men often outperform women on visual tasks.

Some researchers have argued that the increased perceptual sensitivity in women that occurs near ovulation may serve an evolutionary purpose by increasing their chances of copulating successfully with a mate at the crucial time. However, engaging in sexual activities can temporarily play havoc with your sense of smell, a phenomenon known as 'honeymooner's nose'.

But it appears that men can also be the sensitive types and women do not always hold the advantage. The inevitable age-related declines in sensory processing affect men and women differently; while visual and tactile sensitivity starts to decline at a younger age in women than men, the reverse is true for hearing.

Although the majority of us are born with the same array of senses, we perceive the world in very different ways.

Summary

We face the threat today of a world that actually works against our chances of feeling love and developing relationships. The differences in our sensory experiences and outlook have always presented hurdles, but our own existence is evidence of the success of past generations in surmounting them.

However, we face a very different and more complicated challenge today, as societal conventions work against our own biology and starve us of tactile affection. Ensuring that we stimulate all the senses as nature intended is vital, so should we defy social conventions and give in to our animal urges when it comes to finding an ideal partner?

Today's world brings artificiality and confuses the ability of our senses to utilise our animal instincts to find a partner. Sensism is about recreating the most basic and elemental drivers that will provide us with the clarity and sensory balance that we need to ensure that the secrets of love do not keep us worlds apart.



We all strive for success, whether in our careers or in the wider context of our personal and family lives. Success is a key motivating factor in our lives, the reward for our efforts at work, at play or in our relationships.

Yet effort alone is no sure-fire guarantee of success. Some of us struggle to achieve our goals on a daily basis, no matter how hard we work while others seem to glide to success untroubled.

So what separates the high flyers from the low achievers, the chief executive from the rank & file? Education, confidence and luck may all play a part in their considerable achievements, but could the true secret of success lie in something far more elemental - in the realm of the senses?

secrets of success



Making sense of success

Think for a moment about a person you consider supremely successful. They could be a corporate leader, a great politician or a movie star. These are the role models that we aspire to, but while their success surrounds us and shouts at us from television, newspapers and magazines, the precise reasons for it may seem hard to pin down.

Successful people are often said to 'ooze' certain qualities – charm, charisma, even success itself. We may consider them lucky, different or superior and see their success in terms of its superficial trappings – fame, wealth or prestige – yet the secret of successful living goes far deeper. Success, in fact, lives within us all. It's a primeval force that has little to do with luck and everything to do with sensory stimulation.

Success:
little to do with
luck and everything
to do with sensory
stimulation.

Creating the perfect work environment.



Early experience of the senses can be critical in shaping a child's perceptual and emotional abilities.

secrets of success

The recipe for success

In short, the preserve of success does not need to be the preserve of the few. The recipe for success we all seek may seem elusive, but in fact its ingredients are all around us, waiting to be sampled and experienced by everyone.

Take the typical office environment. Offices are intended to inspire productivity and creativity, yet more often than not they produce the opposite effect by being devoid of sensory stimulation. Our appreciation of the immediate environment may be subconscious, but this makes it no less crucial to the way that we perform. Poor lighting, drab colour schemes, dull textures and indifferent odours can all be to blame for an unproductive and inefficient office. An office space, however, that presses all the right multisensory buttons and offers a balanced diet of sensory stimulation can transform a sluggish business team into a dynamic and highly motivated enterprise.

Creating the perfect work environment is therefore a question of understanding our various senses and the stimulation they crave. Scent may not immediately spring to mind when it comes to knuckling down to work, yet ambient odours have been shown to dramatically affect performance in a variety of situations. Lavender, for example, has a reputation for improving concentration, while even commercially available air fresheners have been reported to make people more alert and willing to work.

The right lighting can also affect our performance. Success is all about positivity, and certain lights have been found to enhance mood to beneficial effect, men respond well to reddish light, while women work better in blue.

Meanwhile, as our eyes and noses are unconsciously satisfied, music can take care of the auditory aspects of our environment. Background music arouses the aural senses, stimulating without distracting and boosting morale and productivity – the perfect antidote to the mid-afternoon slump that befalls us all.

A multisensory approach to living could shape the office of the future. With each of our senses stimulated and orchestrated in this way could we all be better placed to make a success of our working lives and emulate our role models?

Successful communication

Successful living is all about good communication - with friends and family, colleagues and customers. When we think about communication, we usually think of speech as our main tool. Yet we can use an armoury of sensory weapons to get our point across or create an even more powerful impression.

Take a meeting with a client where it is important to impress. What to say and what to wear will probably have been carefully thought through in advance - already a double assault on his or her senses. A multisensory approach, however, can be even more powerful. For example, a pleasant fragrance can make us more persuasive in a discussion. What's more, in the presence of such a fragrance, people are more likely to be won over by physical attractiveness than the strength of an argument - a clear example of the potency of multisensory stimulation.

Start the senses young

If learning to stimulate our adult senses appropriately can make such a difference to daily life, then imagine the benefits of starting young.

In fact, early experience of the senses can be critical in shaping a child's perceptual and even emotional abilities - and a rich multisensory environment is essential to healthy all-round development, even before birth. Many of the preferences we show later in life can be traced back to our time in the womb, while tactile stimulation and massage in very early life are crucial to the way we behave in adulthood.

We all want our children to grow up to be successful adults, and early multisensory experiences are certainly key to such success.

Summary

A comprehensive understanding of the senses can be the ultimate recipe for success. A child born and raised in a rich multisensory environment will develop all the right emotional and behavioural weapons with which to take on the world as an adult.

Success is not an elitist option, and should not be defined by money or status. We can all obtain success, but first we need to be in touch with our senses. A full grasp of Sensism can teach us what motivates and inspires us - on however subconscious a level - and help us to maximise our potential in every aspect of our lives.

Success is a question of understanding our various senses and the stimulation they crave.





A true understanding of multisensory integration will enable us to take charge of the senses - and our lives. The most successful products and services will be those that tick all of our sensory boxes.

Multisensory cues will make pursuits from shopping to dining more relaxing and pleasurable, while the environment in which we live and work will reflect a growing recognition that wellbeing and efficiency, far from being mutually exclusive, are actually intrinsically linked.

And if there is a growing understanding of how to improve the world around us, could the world of tomorrow hold the potential to let us improve ourselves? Just what would the world be like if we could heighten our sensory experience of it?

the secrets of tomorrow



The scent revolution

In a world where vision is the dominant sense, and is the principal means by which marketers communicate with consumers, the other senses are marginalised. Consumers are bombarded by tens of thousands of visual sources of information every day, through television, mail, newspapers, magazines, posters and, increasingly, email, making it difficult to catch their eye, let alone inspire them.

While nearly half of the brain is dedicated to processing what we see, more of our genes are devoted to the detection of odours than to any other kind of sensory information, suggesting that in our evolutionary past smell played a far more important role than it does today. And it could do so again. Are we on the verge of an olfactory comeback?

Smell is the sense that is most closely linked to the brain's emotional centre and could therefore be harnessed to provoke a powerful emotional reaction. An understanding and embracing of Sensism could herald a new era of sensory marketing and open up the long neglected communication channels of not just smell, but also taste, touch and sound.

Manufacturers and marketers have traditionally tended to appeal to each sense in isolation, but a growing number of researchers are starting to investigate how the senses interact to create the rich multisensory experiences that fill our daily lives. This understanding will lead to products that more effectively stimulate all of our senses, and so enhance our quality of life. And in commercial terms, multisensory communication could prove even more powerful and effective than our traditional reliance on all things visual.

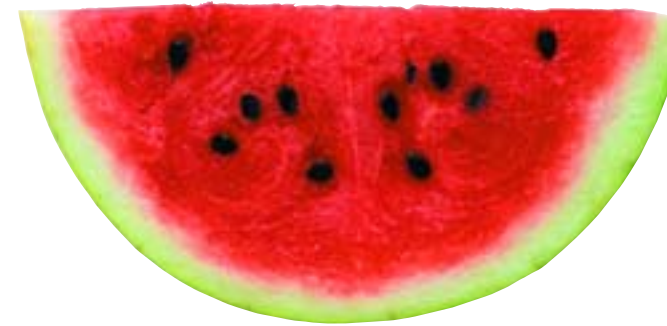
In this century, we may see something of a scent revolution, as smell takes on more of a role.

An understanding and embracing of Sensism could herald a new era of sensory marketing.

Sensism is nothing short of breaking the code for the way we live.



In this century, we may see something of a scent revolution, as smell takes on more of a role.



the secrets of tomorrow

Is a world of sensory superpowers just around the corner?

For instance, it is likely that many more companies will start to develop their own unique 'signature scents'. These scents will help companies to create a distinctive, unifying, and memorable 'scent-image' that will help to distinguish them from their competition.

Such scents may well be designed to have a therapeutic role, perhaps helping customers to relax or put them in a 'buying' mood and provide an especially potent means of creating a lasting impression. Think how certain smells can immediately transport you to a particular place and time. While we might soon forget the unique colours of a visual logo, a signature scent may well stay with us for life.

There is already evidence to support this. People find it easier to identify the smells of particular products such as Crayola crayons and Johnson's baby powder than to identify many natural odours such as coffee or lemon. What's more, people almost invariably associated the brand name with the scent of the product.

Just as the 20th century is all about visual stimuli, the 21st is already moving towards smell and combining the best of all the senses. We do not want to make the same mistakes as before creating yet another dominant sense. Scent alone is not a quick fix remedy for companies, we should be moving towards holistic sensory signatures. In fact, brain imaging techniques may soon be able to determine precisely which odour-colour combinations give rise to the greatest enhancement of neural processing in olfactory areas, and so help to predict precisely which combinations will make the greatest impression.

Becoming a sensory athlete

Is a world of sensory superpowers just around the corner? Just imagine what would happen if we could train our sense to be ever more acute. If we can train our bodies to Olympian standards, surely the same is possible with a sensory workout?

While certain individual differences in sensory perception are genetic, others depend on environmental factors - but just how much can we change our sensory abilities through practice? Can we train our noses to smell better? The answer is 'Yes'.

The average person can recognise around 2000 odours, but with training we can recognise around five times that. Experienced perfumers can name not only the country of origin of a particular sample of lavender oil, but also the farm from which it came. Olfactory experts often claim to be able to create and identify symphonies of smell in their minds using nothing more than their extraordinarily rich and vivid olfactory mental imagery - 'the mind's nose'.

Give your senses a brighter future

Would-be 'supersmellers' should start in the kitchen by trying to identify herbs and spices by their smell alone. Although difficult at first, most people find it much easier after just a few days practice. The next step is to try to identify the component smells in more complex odours such as household products or perfumes. Distractions to the other senses should also be eliminated - turning off any background music and closing your eyes helps.

But when it comes to training your nose, women stand the best chance of becoming sensory athletes. With relatively little training, they are able to improve their sensitivity to a number of different smells five-fold, while men show nothing like as much improvement.

But what of the other senses? One consequence of our visual dominance over tactile perception is that by changing what you see, you can alter, and actually improve, what you feel. For example, in a test, participants asked to decide whether their arms had been touched with one or two fine wire filaments performed better when they were allowed to see their arm

- but critically, not the filaments. More importantly their performance was improved even further when participants looked at their arm through a magnifying lens, so that their arm appeared to be bigger than it actually was.

Such research suggests that the best way to improve our sense of touch may be to change what we see. In the same way, what we hear can also make a difference - as many skilled craftsmen have known for years. Carpenters who want to assess the finish of a piece of furniture often place a sheet of paper under their fingertips before running their fingers and the paper over its surface. The subtle sounds made by the paper as it passes over the wood act as auditory cues as to how it actually feels.

Summary

The global embrace of Sensism may soon see the arrival of products that engage the consumer on several sensory levels. The age of the purely visual assault on our senses is over - and our supermarket shelves are set to fill our daily lives with a range of multisensory experiences.

Sensism holds the promise of a new era of personal empowerment. To understand it is a major step to enhancing our wellbeing that will have the most profound effects on society. Embracing Sensism is nothing short of breaking the code for the way we live.

A holistic approach to the senses is a new way of living - and its time is now.

The full version of the ICI Report on the Secrets of the Senses is priced at £200 and is available by contacting ICI Corporate Communications on +44(0)20 7009 5000. Profits from the sale of the report will be donated to Sense, the UK's leading organisation working for people with deafblindness and associated disabilities.