

STUDENT WRITER COMPETITION JUDGES' REPORT

This was the fifth annual Student Writer Competition, sponsored by *The Psychologist*, the Research Board and the Professional Practice Board. We received 32 entries, a decent jump from last year. We hope that this year's winning articles will inspire even more people to have a go next year.

Articles were rated blind on quality of writing; clarity of argument; and accessibility, relevance and interest for *The Psychologist's* audience. As we've said in previous years, these are tough criteria. Some essays cited some interesting and sound evidence without really bringing the subject to life for those outside that particular area. *The Psychologist* will be working with some of these authors on revised versions for review in the future, so if you're thinking about entering next year, remember: even if you don't win there's a chance that a version of your article may be published.

Choosing between the articles was a difficult task. What we liked about the winning entries was that they came across as if they had been written for us rather than for another purpose, such as a coursework essay. Both authors made an effort to engage our readers by taking a seemingly everyday topic and looking at the psychological angle. The essays really show that psychology is 'at work' all round us – in this case in the natural world and the coffee shop. We are pleased to publish the winning articles here, with our congratulations. The winners get an expenses-paid trip to the Society's London Lectures or Annual Conference. We look forward to all your entries next year.

Jon Sutton (Editor, *The Psychologist*)

Mumtaz Ahmed Khan (Professional Practice Board)

Tamar Pincus (Research Board)

Back to our roots for serenity?

Where nature may heal and cheer and give strength to body and soul alike.

John Muir (1838–1914),
The Yosemite, 1912



LESLEY THOMS, the winner in the undergraduate category, suggests a role for ecopsychology in improving well-being.

If you were asked to imagine scenes of serenity and composure, what would they be? It is unlikely that such images would be of the workplace, or of rush-hour traffic. It may be no surprise, but the natural world is thought to captivate our senses and liberate the psyche. However, theories and studies grounded in this ecological perspective seem buried under modern-day enthusiasm to focus on the 'independent' person. Unable to see the wood for the trees, contemporary thinking may fail to notice aspects of nature that have been recognised and accepted for centuries.

Although the understanding of nature's healing energy is rather primitive, it has only been with contemporary deliberation that this 'folk psychology' has been theorised academically. Kellert and Wilson's (1993) biophilia hypothesis has nurtured the steady growth of ecopsychology; a theoretical perspective within psychology whose applications principally branch out into the realms of psychotherapy. This hypothesis essentially says that it is in the human history of interaction with the natural environment,

now imbedded within the genetic structure, that the emotional attachment to the living world resides (Wilson, 1993). A world that we are a part of (Hillman, 1995), mutually supporting (Roth, 2000) to preserve its beauty and mothering nature, which successively maintains our own physical, psychological and evolutionary fitness.

But it is apparent that this bond is wilting in today's world of city living, independence and accelerated pace. Seldom do we reap the fruitful benefits that nature can offer us; if we did, we would perhaps find ourselves on a higher plane of mental and spiritual reward.

Such rewards have been noted to inspire hospitalised patients who view scenes of foliage and other natural features. A reported 95 per cent of patients, staff and visitors claimed to experience positive changes in mood due to gardens and outdoor spaces within hospital settings (Cooper Marcus & Barnes, 1995). Ulrich (1991) unearthed findings suggesting that views of the natural environment can

reduce the length of a patient's stay, and even reduce the amount of medication the patient requires. As the patient, we will focus on the physician tending to our bodies – but it would seem that nature is always nursing our minds, and this appears to be the locus of much remedial support.

This therapeutic energy is not confined to the recovering patient. Nature can alleviate mental fatigue in the majority of people, particularly heightening attentional functioning and lowering levels of aggression (Kuo, 2001; Kuo & Sullivan, 2001). We too can experience and garner the positive effects that nature appears to offer, more so in times of increased levels of aggression and tension it would seem. Francis and Cooper Marcus (1992) found that outdoor settings were the preferred location for people in times of stress. Specifically, more participants noted 'organic' locations, encompassing natural elements such as water. Interestingly, the desire for physical exertion as a means of reducing stress was not as highly rated.

This could imply that those of us finding peace of mind from orienteering and other 'wilderness' activities do so from merely being with nature rather than through physical hardship, as was initially thought from studies of wilderness experiences (see Kaplan & Kaplan, 1989).

Wilderness or back garden?

The positive experiences gained from the natural world may not necessarily come from the condition of the wilderness itself, but perhaps more from the state of the mind that has been inspired by the land (Robinson, 1975). People who were asked to rate their preferred experiences gained from the wilderness, generally identified that simply enjoying the natural surroundings preceded any other preference, such as reduced tension or physical fitness (Driver *et al.*, 1987). This comfort found within nature has been shown to grow into feelings of equanimity and peace with oneself (Kaplan & Talbot, 1983).

There may be little dispute that the natural environment which surrounds us all can provide positive emotions, soothing the pressures of the modern day. The question that remains is *how* nature can charm us into these states of mind. An answer to this uncertainty has its roots in Roszak's (1992) eight principles of ecopsychology. Following these principles, it is believed that we each have an ecological unconsciousness embedded within the core of the mind, and when exposed to the natural environment can harvest the benefits of health, sanity and contentment (Roszak, 1992). Based on this doctrine, the remote countryside is not the sole source of nature to evoke these feelings. Perhaps somewhere closer to home will suffice; a nature reserve, park, or even your back garden.

Although research into the psychological effects of gardening has been somewhat modest, interest has blossomed over the last 20 years, finding similar responses to those studies focusing on outward-bound programmes. From professional and recreational gardeners, the highest average rating for gardening satisfaction was noted to be feelings of peacefulness and tranquillity, followed by the fascination with nature (Kaplan, 1983; Kaplan & Kaplan, 1987). More long-term benefits have been reported, including increased levels of house and job satisfaction and an overall contentment with life in general (Kaplan & Kaplan, 1989). It is not a necessity to reach for comfort within the great scope of the wilderness; reaching for the trowel instead

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whilst entering the great scope of your garden may provide you with the liberation and satisfaction that you desire.

Naturally uplifting

No matter where you go, any element of nature can create positive feelings. However, the urges of contemporary

society to remain self-contained seem too large at present to incorporate the effects that nature can have on the individual. Our interconnection with the environment seems lost within societal norms, yet we do not seem to fully understand the consequences this can have on our individual well-being (Conn, 1995). To study ourselves, we must simultaneously study the natural environment (Hillman, 1995). Perhaps to help ourselves, we must help the planet at the same time.

The collection of research and theories that we have addressed here are merely spit deep, and there is much more to discover about nature's healing and uplifting effects. Empirical research to date has established that the natural environment can be relieving and may thus help maintain emotional health, yet recognition of this from a large population may prove to be more difficult to establish. Nevertheless, as the study of ecopsychology grows, and with it the understanding of nature's benefits, a more widespread appreciation may be on the horizon.

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Psychology in the coffee shop

THIS drug permeates every level of society. Around the world people are gathering mornings, lunchtimes and afternoons for the consumption of the stimulant in brown, socially acceptable, liquid form. People drive, work and play under the influence. It's found in factories, hospitals and even schools. It's caffeine, of course. The chances are that you, reading this, are either about to have a cup of tea or coffee, or have just had a cup. The seeming ubiquity of the drug has not stopped further growth in coffee culture. The coffee shop has enjoyed a recent surge in popularity, repopulating the high streets of the UK, making us all familiar with the difference between a latte and an espresso, a cappuccino and a frappuccino. In the 1990s global sales of coffee leapt from \$30 bn to \$50 bn. (Although, we should note, the money received by growers dropped from \$12 bn to \$8 bn; see www.oxfam.org.uk.)

Coffee contains the stimulant caffeine, which has neurophysiological and cognitive effects, but buying and drinking a cup of coffee happens within a wider social context. The resurgence of coffee shop culture might have major civic, social and interpersonal consequences far beyond just meaning that I can get a nice cup of Java pretty much anywhere I want.

That feel...

So what is in your cuppa, and how does it work? Tea and coffee both contain caffeine. By weight tea contains more caffeine, but when prepared into drink form coffee will usually have a higher concentration. Tea also contains a small but significant amount of theophylline. Theophylline is an isomer of caffeine and has similar stimulant properties, but is also known to increase the area of the lungs used in oxygen absorption.

Caffeine is exceptionally permeable. It has no trouble passing the blood-brain barrier. Within an hour of drinking a cup of coffee there is probably caffeine in every cell of your body, and traces to be found in all your body fluids.

The best theory for caffeine action is adenosine blockade theory (Dunwiddie & Masino, 2001). Adenosine is a neurotransmitter associated with mood depression, inhibition of gastric secretion, slowing of the heartbeat and general lowering of neural activity. It is involved



TOM STAFFORD, the winner in the postgraduate category, investigates the coffee break.

in many secondary messenger systems at the synapse. Caffeine blocks adenosine receptors and hence lessens the action of adenosine, increasing the rate of spontaneous firing, elevating mood, blood pressure, heart rate and gastric activity. The elevation of blood pressure caused by caffeine consumption has been shown to increase pain tolerance (Keogh & Gerke, 2001). This is just one of the many effects of caffeine consumption that are relevant to psychiatrists and doctors (Paton & Beer, 2001).

the ritualisation of beverage preparation that is found among caffeine users, and is found to some extent among users of all drugs. Just as preparation of heroin for injection is done with reverential care, so many coffee or tea drinkers insist on their preferred method of brewing with a precision bordering on fanaticism. Sparks fly if you combine tea, teapot, cup, milk and water in the wrong way in the presence of the tea-connoisseur. The issue of how and when to plunge the cafetiere is the subject of many rival theories among serious coffee drinkers.

Other indicators of conditioning-based obsession combined with addiction among coffee drinkers are choosiness, time and effort spent acquiring a fix, and investment in elaborate paraphernalia. The reinforcing effects of caffeine establish the ritual in the wider context of daily routine, making the problem of quitting more than just overcoming the obstacle of physical addiction to the drug. Hence decaf.

Simply put, caffeine is addictive and many people are motivated to maintain their consumption to avoid aversive withdrawal symptoms, rather than for the positive side-effects (Schuh & Griffiths, 1997). Although caffeine has potential as a drug of abuse, the low cost and widespread availability of coffee mean that most people can learn to effectively manage their habit for maximum benefit to themselves, balancing the effects of caffeine to dovetail with their work demands and mood requirements (Weinberg & Bealer, 2001). Indeed, one review recently declared that 'regular caffeine usage appears to be beneficial, with higher users having better mental functioning' (Smith, 2002, p.1243).

'Creative lighter fluid'

The cognitive benefits of coffee are so well feted in popular culture that it is not necessary to eulogise them here. Suffice to say that the cup of coffee is inextricably linked with images of intellectual endeavour. From the iconic image of the

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Our love affair with coffee has implications for a range of psychologists

Caffeine has also been shown to affect dopamine (Garrett & Griffiths, 1997). This puts it in a class with the stimulants whose action is based primarily on dopamine (e.g. amphetamine and cocaine). The action of caffeine is comparable to, but less strong and more subtle than, the action of these two drugs.

Reward, reinforcement and ritual

Dopamine is strongly associated with subjective feelings of reward and heavily implicated with the physiology of reinforcement, via receptors in the nucleus accumbens (Robbins & Everitt, 1996). We can assume that like other reinforcers coffee will strengthen the behaviours that precede consumption. This might explain

café-philosopher to the brown-ring stains on essays and air of near panic that settles on a department if the coffee lounge is shut unexpectedly.

The essayist Floyd Maxwell declared coffee 'creative lighter fluid', and there's a saying among mathematicians that 'a mathematician is a device for turning coffee into theorems'. The experimental investigation of the cognitive effects of caffeine stretches from Holck (1933), who found that coffee enhances ability to solve chess problems, to recent investigations of the interaction of caffeine and personality type. Early results (discussed in Weinberg & Bealer, 2001) suggesting that extraverts might receive more cognitive benefit from caffeine than introverts, possibly because they are harder to over-arouse, have not been confirmed (Liguori *et al.*, 1999).

Small worlds, social grooming and distributed cognitions

Many drugs seem to have a synergistic relationship with social interaction. Social situations are based around and encourage drug use, while drug use seems to enhance the pleasure we derive from social interactions. Caffeine is no exception. Coffee provides an excuse for – and a spur to – our need for social interaction.

As geographical hubs of social interaction, coffee shops provide an opportunity to recognise the small world nature of society (Milgram, 1967). A 'small world' is one in which any pair of individuals can be connected via a surprisingly small degree of separation (Watts & Strogatz, 1998). It is small-world effects that we are recognising when we realise that we went to school with the neighbour of the person we have just met on the train, or similar. Kleinfeld (2002) has questioned whether social networks really do have small-world properties, or whether we have a bias towards seeing the world in terms of small worlds, a bias that makes the world seem more comprehensible and comfortable. Regardless of where the truth lies in this matter, Kleinfeld's paper points to the desire we have to *create* small worlds. This helps explain the success of café-chains such as Starbucks, an otherwise unremarkable multinational that sells itself as offering a 'third place outside work and home'. Maybe as social capital declines (Putnam, 2000) so we are willing to pay more to reclaim the semblance of the community we are losing.

Coffee shops and lounges provide a spatial bottleneck in our daily routines,

increasing the probability that we will encounter those we know loosely, as well as those we know well. The connections we have to people outside of our immediate circle of friends and family, although they form a small proportion of our social links, provide the crucial glue to bind a network into a coherently linked whole. This is 'the strength of weak ties' (Granovetter, cited in Gladwell, 2000).

The café is a hive of gossip, which has social grooming functions (Dunbar, 1997). We use gossip to establish and maintain our connection within a group, as well as for mere information transfer. So, by providing a space for the regular, but unplanned, interaction of community members, coffee shops play a role in creating social networks, and thus in turn in encouraging civic values (Cohen *et al.*, 2001).

Coffee shops, as meeting places, also foster the spread of information. This occurs informally, as an inevitable result of gossip and socialising, and via the availability of notice boards, which can provide a riotously democratic forum, advertising everything from evening classes and political meetings to pet-minding services. As information passes through a social network, which no individual has a complete map of, so coffee shops become part of a system of distributed cognition

(Hutchins, 1991), a place that allows collective decisions and collective memory retrievable (Wegner *et al.*, 1991; Weldon, 2001). As people meet, in pairs or groups, the collective experience of the community is retrieved and exchanged. The network of individuals influence and are influenced. The behaviours and norms that come to be adopted – whether over grand political issues or, for example, over what to do locally about plans for a new bypass – are the reflection of this ongoing, interactive, collective cognition.

The role of 17th century coffee shops in creating a civic space and a commensurate sense of 'public opinion', and the importance of that for the growth of democracy, has been discussed by historians (Habermas, 1989). In the 21st century we might hope that the resurgence of the coffee shop will be followed by a comparable resurgence of civic values and participatory democracy.

Just as caffeine permeates every corner of society, and, once drunk, every cell of our bodies, so the effects of caffeine are found at all the levels of description that psychologists are concerned with – neurophysiological, cognitive, clinical and social.

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