What Am I *Doing*?!

Some people collect for investment. Some collect for pleasure. Some folks do it to learn about history. And some people "save things" because it helps them to fill a gaping hole, calm fears, erase insecurity. For them, collecting provides order in their lives and a bulwark against the chaos and terror of an uncertain world. It serves as a protectant against the destruction of everything they've ever loved. Are we getting too deep here? Well, haven't you ever wondered why some people are 'collectors' and some aren't? I thought it might be interesting to take a look at a scientific explanation of 'what makes us tick'.

"Most people have a collection of some kind at some point in their lives. Indeed, historical studies show that acquiring and retaining objects, even when they are not necessary for survival, is not only nearly universal, but also has been part of human behavior since the earliest human societies. Yet despite the ubiquitous nature of this trait, very little is known about what drives humans to collect.

By studying patients who developed abnormal hoarding behavior following brain injury, neurology researchers in the University of Iowa Roy J. and Lucille A Carver College of Medicine have identified an area in the prefrontal cortex that appears to control collecting behavior. The findings suggest that damage to the right mesial prefrontal cortex causes abnormal hoarding behavior by releasing the primitive hoarding urge from its normal restraints. The study was published online in the Nov. 17 *[2003/2004]* Advance Access issue of the journal Brain.

Hoarding behavior is common among animals; around 70 species hoard and mostly they hoard food, which makes sense from a survival standpoint. Studies of hoarding behavior in rodents have shown that collecting is driven by certain primitive structures deep in the brain and most mammals, including humans, share these subcortical regions.

"But human collecting goes beyond items that are solely useful for survival," said Steven Anderson, Ph.D., UI associate professor of neurology and lead author of the study. "People often collect art or stamps or pretty much anything. Clearly there is some higher structure in humans that modulates the collecting drive and that's what we think we have tapped into."

The UI team studied 86 people with focal brain lesions - very specific areas of brain damage – to see if damage to particular brain regions could account for abnormal collecting behavior. Other than the lesions, the patients' brains functioned normally and these patients performed normally on tests of intelligence, reasoning and memory.

A questionnaire completed by a close family member was used to identify problematic collecting and the behavior was classified as abnormal if the collection was extensive; the collected items were not "useful" or aesthetic; the collecting behavior began only after the brain injury occurred; and the patient was resistant to discarding the collected items.

The questionnaire very clearly split the patients into two groups – 13 patients who had abnormal collecting behavior and a majority (73 patients) who did not. Unlike normal collecting behavior such as stamp collecting, the abnormal collecting behavior of these patients significantly interfered with their normal daily life. Patients with abnormal collecting behavior filled their homes with vast quantities of useless items including junk mail and broken appliances. Despite showing no further interest in the collected items, patients resist attempts to discard the collection.

The Psychology of Collecting

To determine if certain areas of damage were common to patients who had abnormal collecting behavior, the UI researchers used high-resolution, three-dimensional magnetic resonance imaging to map the lesions in each patient's brain and overlapped all the lesions onto a common reference brain.

"A pretty clear finding jumped out at us: damage to a part of the frontal lobes of the cortex, particularly on the right side, was shared by the individuals with abnormal behavior," Anderson said. "Our study shows that when this particular part of the prefrontal cortex is injured, the very primitive collecting urge loses its guidance.

"This finding sheds some light on a ubiquitous, nearly universal human behavior that we really don't know much about, and we can use this as springboard to think about normal collecting behavior." Anderson added that the findings also may have implications for understanding certain neurological conditions such as obsessive-compulsive disorder (OCD) where abnormal collecting behavior occurs but the patient has no readily detectable brain defect.

"Patients with OCD and some other disorders such as schizophrenia, Tourette's syndrome and certain dementias, can have similar pathological collecting behavior but we don't have a pointer to locate where in the brain the problem is occurring," Anderson said. "Our hope is that our findings with these brain lesion studies will lead to insights in these conditions as well."

[Anderson's co-authors on the study were Antonio Damasio, M.D., Ph.D., the Maurice Van Allen Professor of Neurology and head of the department, and Hanna Damasio, M.D., UI Foundation Distinguished Professor in the Department of Neurology. http://www.eurekalert.org/pub_releases/2004-12/uoi-bri121504.php]

Well, *now* how do you feel about your collecting?! Like a bug, probably! Actually, the study above is only focusing on *abnormal* collecting behavior...so that lets us out...*Well, most of us, anyway.* It *is* interesting to find, though, that there is apparently an area of the brain that controls the 'collecting impulse'. Obviously, that area is much more 'highly developed' in our case compared to people who are not collectors *[poor souls!]*.

It does make sense, though, even to us non-scientific types, doesn't it? The more you meet other people who collect, the more you find that there's a very high percentage of those people who collect more than just matchcovers...They're into *a lot* of other stuff! The vast majority of us aren't simply 'matchcover collectors'...we're just 'collectors'! And, most of us can probably trace that collecting interest far back into our childhoods. I can. I always collected things—baseball cards, horned toads, marbles, and on and on. Now, as an adult, I collect matchcovers...and old books...and *Scientific American* magazines...and business cards...and...Well, you get the idea.

Did someone drop us on our respective heads as infants? Apparently not. *Now* we know the answer. The next time someone giggles and asks you why you collect matchcovers, here's your response.

Drawing yourself up to your full height *[hopefully this means that you will be able to look down on that person]*, you give him or her a haughty 'Because I have a highly developed prefrontal cortex, you ninny!' Ah, life is sweet!