

通信科技英语

文选

南京大学大学外语部 主编



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新科技英语

文选

南京东南大学外语学院 王树德

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通俗科技英语文选

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Why We Turn Gray?

Gray hair.

The process starts deep in the epidermis, where millions of pigment cells, called melanocytes, produce chemicals that determine the coloring of hair and skin. Once hair has been pigmented by the melanocyte's action, the color cannot be changed because the pigmentation is not just a coating to the hair; it is infused.

With time, the melanocytes deteriorate and their pigment-producing chemistry begins to shut down. It is a gradual process and, for the period that the melanocyte is still functioning at reduced capacity, the bulb may produce a hair that is gray, or incompletely colored.

As time goes on, though, the melanocyte stops working completely and the hair bulb turns out a completely white product. The process can also be influenced by a variety of diseases that prematurely — and sometimes reversibly, if the disorder is detected early enough — reduce enzyme chemistry and interfere with the pigment cells.

In the vast majority of cases, age and the natural evolution of melanocytes — culminating in their cessation of function — is the cause of graying.①

Thyroid disorders are a common cause of premature failure of the melanocytes. Diseases affecting the pituitary gland probably reduce hair coloration, and even interruptions of hormone production in the testicles or ovaries can

bring about premature graying. Diabetes can cause enough of a hormone imbalance to affect hair color, too, as can severe malnutrition. Premature graying has also been associated with a possibly heightened risk of heart disease.

Experts believe that vitamin and mineral supplements and dietary changes generally cannot influence the process, and in cases of pernicious anemia, a deficiency in Vitamin B-12 may actually influence graying.

Stress and worry probably exert a tangible influence on the pigment cell chemistry. The mechanism by which stress reduces melanocyte function is not understood, but the evidence that it exists is substantial.

The shutdown of the pigment cells usually occurs gradually. About 100 hairs a day are lost just from natural attrition. With age, the older dark hairs fall out, leaving a greater proportion of newly-created white hairs. As white hairs gain the majority, the grayness appears to increase. Thus, grayness is an optical illusion created by the mixture of the remaining dark hairs and the newer white hairs.

All of this begins to occur earlier than most people realize. A study found that between 22% and 29% of men and 23% and 35% of women have some discernable graying by the time they are 25.^② About 1% of high school graduates may already be perceptibly gray—a classic example of premature coloration.

By 65, everyone has a significant amount of gray hair, even if they continue to appear dark-haired.^③ The 40s and 50s are the ages of intense acceleration of graying for most people.

The phenomenon of turning white in a very short period of time—a matter of days or weeks—does not occur because the dark hair actually turns color.^④ Turning white can be due to spontaneous loss of remaining dark hairs on the head of a person who has already produced a large volume of white hairs. Since the dark hairs are older, they would be lost first, leaving only the white strands in place.

The head grays first at the temples and on the sides, then on the top. The process cannot be arrested, despite the dyes and hair colors, and probably can't be slowed. It's physiologically harmless, yet most people don't like it.

词 汇

epidermis [epi'də:mis] *n* 表皮
pigment ['pigmənt] *n* 色素
melanocyte ['melənəu,sait] *n* 黑素细胞
chemistry ['kemistri] *n* 化学过程
culminating ['kʌlmineitiŋ] *a* 达到顶点的
thyroid ['θairɔid] *n* 甲状腺
pituitary [pi'tju:itəri] *a* 脑垂体的

testicle ['testikl] *n* 睾丸
ovary ['əʊvəri] *n* 卵巢
diabetes [daɪə'bi:tɪz] *n* 糖尿病
pernicious anemia [pə'niʃəs ə'ni:mɪə] *n* 恶性贫血
 a matter of ... 左右; (关于) ... 的问题
 in place 就地, 在原地
physiologically [ˌfiziə'lɒdʒikəli] *ad* 在生理上

注 释

- ① In the vast..., age and the natural evolution of melanocytes—...—is the cause of graying. 本句为简单句。句中谓语法词用 *is* 是因为主语 *age and the natural evolution of melanocytes*

tes 被视为不可分割的整体;另外,the cause 中的定冠词 the 隐含有“唯一”的意味。

- ② A study found that ... have...by the time they are 25. 本句为主从复合句。主句的谓语动词为: found; that 引导的是宾语从句,其谓语动词为一般现在时: have; 另外, they are 25 为定语从句,修饰 the time, 其谓语动词也为一般现在时。本句中,主句和从句的时态不一致,系作者认为现在的情况也不会有大的改变。对表示经常发生的事,可用一般现在时。
- ③ By 65, everyone has..., even if they ... dark-haired. 本句为主从复合句。主句中的主语为: everyone, 而让步状语从句中的主语 they 也指 everyone。这是现代英语的一种趋势,为了不明指 everyone 到底是 he 还是 she, 故用 they 来代替 everyone。
- ④ The phenomenon of ...time—a matter of...weeks—does not occur because ... color. 本句是主从复合句。本句属于转移否定的句型,即含有原因状语从句的主从复合句,其主句的谓语为否定形式,在翻译时,应将其否定意义转移到原因状语之前。本句意为: The phenomenon...occurs not because...color。

参考译文

人的头发为什么会变白?

白发。

头发变白的过程始于表皮深层,那里有数以百万计的色素细胞,称之为黑素细胞,产生出决定毛发和皮肤颜色的化学物质。头发一旦通过黑素细胞的着色作用,便永不变色,因为这种黑素细胞的着色作用不仅仅停留在头发的表面,而且也渗透到头发的里面。

天长日久,黑素细胞会出现自然衰变,其产生色素的化学反应便开始停止。这是一个逐渐停止的过程。在此过程中,黑素细胞仍在进行产生色素的化学反应,不过,其着色功能已逐渐减弱。因而,毛发球就会长出灰白的头发,即着色不深的头发。

然而,随着时间的推移,黑素细胞便完全停止其产生色素的功能,

毛发球便长出纯粹的白发。这种黑素细胞产生色素的功能也会受到多种疾病的影响，它们会过早地减弱酶的化学作用，干扰色素细胞的生长——如果这种功能紊乱被及早发现的话，有时，也可使这一功能得以恢复。

在绝大多数情况下，人的衰老以及人体黑素细胞的自然衰变——最终停止其产生色素的功能——就是头发变白的原因。

甲状腺功能失调则是黑素细胞早衰的一个通常原因。对脑垂体腺有影响的疾病可能会减弱毛发变黑。甚至睾丸或卵巢里性激素分泌的中断也会使人早生白发。糖尿病足以导致性激素功能的失调，从而影响头发变黑。严重的营养不良也亦如此。头发过早变白可能与患心脏病的危险增大有关联。

专家们认为，维生素和矿物质的增补剂，以及饮食的变化一般都不会影响人的头发变白。但对于恶性贫血症的患者来说，如果缺乏维生素B-12，那么，的确会影响其头发变白。

精神紧张和感情忧虑可能会对色素细胞的化学作用产生有形的影响。人们尚不清楚精神紧张减弱黑素细胞功能的作用过程。但是，有证据表明，这种作用过程确实是存在的。

色素细胞的功能减退通常是逐渐发生的。每天约有一百根头发由于自然磨擦而脱落。随着年龄的增长，早先长出的黑发会脱落，剩下更多的则是新生的白发。由于白发增多，头发便逐渐呈灰白色了。因此，头发呈灰白颜色是由于尚未脱落的黑发与新近长出的白发混在一起而产生的一种视错觉。

大多数人在自己还没有意识到之前，头发已开始变白了。一项调查表明：百分之二十二到百分之二十九的男性以及百分之二十三到百分之三十五的女性，在二十五岁时已有几根白发依稀可辨了；大约百分之一的中学毕业生可能已白发晰然了——这是典型的少年白的例子。

人到六十五岁，必然有一定数量的白发，即使看上去头发仍呈黑色。对于大多数人来说，四、五十岁头发会急剧变白的。

在极短的时间——大约几天或几星期——内，头发骤然变白的现象，并非是因为黑发果真一下子就变白了，而是因为一个人已长出了大

量的白发,而头上残留的黑发又自然脱落了。由于黑发长出较早,故先行脱落,原处长出的便是缕缕银丝了。

人的鬓角及两边的头发首先变白,然后头顶才变白。虽有染发剂,但头发变白的自然法则却无法遏止,大概也无法延缓。白头发在生理上对人无害,不过,大多数人却不喜欢白头发。

秦之勇 译注 远鸽 校

Talking Without Opening Your Mouth

If a picture is worth a thousand words, a gesture can be worth two thousand. Non-verbal signals are often more powerful than verbal ones. We can try as hard as we like to be polite but if we don't like someone, that fact leaks out in so many small ways.

One tell-tale sign is pupil dilation. Pupils usually grow bigger if we like someone or are interested in them, smaller if we're not.①

But this cannot always be read in the same way. Pupil dilation is an appeasement gesture and is also one of the nonverbal signs associated with lying.

Pupils enlarge when a person is lying and he or she will avoid eye contact in order to hide this fact. It is also very difficult to stop yourself from making some sort of gesture towards the face. Children will sometimes cover their whole face when lying. In adults, it's usually scratching the nose or brushing their hair back.

Positive and sympathetic body language is skill integral to counselling where you need to make people feel

at ease.

You can't sit back with your arms folded which is a superior stance usually read as cutting people off.②

Being able to read, or decode, body language also helps you to assess the problems.

For instance, a lowering of eyes suggests that there is something deeper down that is not being expressed.

Sensitivity to body positions and gestures can also contribute to knowing people's attitudes. If he or she leans on the table or crosses his legs in the other direction, the others will change their seating position to fall into line usually within a period of five minutes. If a person doesn't change position, this often means that they aren't in agreement.③ They are taking a physical stance, if not a verbal one, against the group.

Every position you take whether you sit or stand, the way you hold your arms, arrange your legs, gesture, brush your hair back, all of these actions have negative or positive aspects and can poison all other forms of communication.

But despite the importance of body language, most people go through life unaware of the effect they are having on others and misinterpreting signals that come their way.

词 汇

leak out 漏出, 泄漏

dilation [dai'leiʃən] *n* 扩张

nonverbal ['non'və:bəl] *a* 非语言的

appeasement [ə'pi:zmənt] *n* 满

足; 抚慰

scratch [skrætʃ] *vt* 搔, 抓, 挖

integral ['intigrəl] *a* 缺一不可的, 主要的

stance [stæns] *n* 姿态, 位置

注 释

- ① Pupils usually grow bigger if we ... are interested in them, smaller if we're not. 句中, smaller if we're not = pupils usually grow smaller if we're not interested in them.
- ② You can't ... with your arms folded which is ... stance usually read as cutting ... off. 本句为主从复合句。在主句中, with your arms folded 为含有 with 的独立主格结构, 作伴随状态状语; which 引导的是定语从句, 其中, which 代替前面整个句子的内容。而 usually read as ... 则为过去分词短语作定语修饰 stance; as 是介词, 意为“作为”。
- ③ If a person ..., this often means that they aren't in agreement. 本句为主从复合句。If 引导的是条件状语从句; 主句中的 this 指的是条件句的全部内容。而在主句中又有一个 that 引导的宾语从句, 其中主语 they 是指条件句中的主句 a person。看来作者 (Alice Greenway) 是位女权主义者, 她不愿用 he 来代替前面的 a person。文章中曾用过 he or she, 这儿, 她不愿再重复, 故用 they 来代替 a person。

参考译文

不开口也可交谈

倘若一幅画面的寓意需用一千字来解释的话, 那么, 一种姿势的寓意则需要两千字才能解释清楚, 在表达感情方面, 通常非语言信号要比语言信号更为有力。我们可尽量表示对他人的礼貌, 但是, 如果我们不喜欢某人, 这一感情总会以多种不同的细微的方式流露出来。

流露感情的一个征兆就是瞳孔放大。假如我们喜欢某人或对其感兴趣, 此时, 瞳孔通常就放大; 反之, 瞳孔就会缩小。

但不能一概而论, 瞳孔放大是一种满意的表示, 同时也是与说谎有关联的非语言信号之一。

人在说谎时, 瞳孔会放大。为了掩饰这种说谎, 他(她)会避开他人

的视线。就是你本人也很难不在面部有所表示。说谎的儿童有时会双手掩面；而成年人则通常用挖鼻孔或向后整理头发来掩饰其说谎。

在与他人商谈问题时，你倘若不想使对方感到紧张，那明确而和谐的动作语言是必不可少的。

不能双臂交叉仰靠在椅上，因为这是一种傲慢的姿态，这常被人理解为不愿再交谈下去的意思。

在理解、破析对方内涵方面，动作语言也可有助你判断问题。

例如，某人两眼朝下看，即暗示他内心还有某种尚未说出的隐秘。

对人体所处的位置和姿势的敏感也有助于了解人们的态度。如果他（她）趴在桌上，或双腿换了个交叉的姿势；而其他人在五分钟内也会改变其坐的姿势，这便说明了双方已取得了一致的意见。倘若有人不改变其姿势，这通常意味着他持有不同意见。如果不用动作语言的话，那么他们就会采用人体的姿势来表示他们的反对意见。

人们所采取的每一个姿势，不管是坐着，或是站着，不管是那种举臂的样子、跷腿的姿势、手势的幅度以及向后整理头发的动作，所有这一切都有其正、反两个方面的内涵，而且有可能会破坏所有以前和谐的交谈。

尽管动作语言十分重要，但大多数人在生活中并没有意识到他们的动作语言对其他人所产生的影响，同时他们也没有注意到他们在误解别人的动作语言。

唐文彩 梁为祥 译注 童窗 校

Which Milk Is for You?

The choices of milk have multiplied far beyond the usual range of whole milk to skim by way of low-fat.① But which one — if any — is for you? Here is help in sorting out the variations on plain milk.

On the way from whole milk to skim milk, some of

the flavor is siphoned off with the fat. If you are nutrition conscious but miss the richness of whole milk, you might consider buttermilk. It used to be what was left after skimming the butter off churned cream. Today's buttermilk is low-fat or skim milk in which harmless bacteria are grown to add tartness and flavor.

Another bacteria-spiked product, acidophilus milk, enjoys wide popularity. Devotees believe it improves digestion and helps to replenish "good" bacteria in the gut wiped out by antibiotics. But the evidence is anecdotal; no studies document these benefits. If you try acidophilus milk, you will find it tastes like ordinary milk.

Lately, researchers have been adding calcium to low-fat milk. The extra calcium doesn't affect the taste or calories, and it furnishes the recommended daily requirement in two rather than four glasses of milk.

Formula or human milk is better than cow's milk for infants. And while most of them outgrow it, up to 7 percent of children are allergic to cow's milk. They can drink milk made from soybeans that is comparable in protein to animal milk.^② Unflavored soy milk tastes dry and unpleasant, but it also comes in carob, vanilla and malted varieties.

Some two thirds of the world's adult population, primarily those not from Western Europe, have an intolerance to milk. Such people lack an enzyme that allows them to digest lactose and suffer abdominal fullness, gas and sometimes diarrhea. Fortunately, there is a milk in which the sugar has already been broken down. To make it, special pills can be added to ordinary milk. The taste