

# INGLÊS

The following text refers to questions 21 to 28.

## THE SCIENCE OF LAUGHS

*Scanning brains and eavesdropping on chimps, researchers are figuring out why we chuckle, guffaw and crack up. Hint: it isn't funny.*

**BY SHARON BEGLEY**

01 Thinkers from Plato and Aristotle to Kant, Darwin and Freud  
02 have tried to **fathom** laughter (Plato feared it would disrupt  
03 the state, and Kant theorized that it arises when what you expect  
04 to happen doesn't, ... ( I ) ... is why surprising punch lines  
05 work), but they've been long on philosophy and short on science.  
06 Lately, though, an intrepid band of researches ... ( II ) ... to  
07 remedy that. With techniques like MRI brain scans to probe why  
08 people cannot tickle themselves into paroxysms of laughter, they  
09 are tackling "one of the last great unsolved problems in human  
10 behavior," says neuroscientist Robert Provine of the University  
11 of Maryland, ... ( III ) ... book, "Laughter: A Scientific  
12 Investigation," was just published.

13 To investigate the roots of laughter, scientists ... ( IV ) ...  
14 to our primate cousins. If you tickle a chimp (carefully; and  
15 preferably a baby), it will likely laugh, but the sound ... ( V ) ...  
16 human laughter so much as it does panting, with one sound per  
17 inhale and exhale. Provine realized that the reason chimps  
18 cannot emit a string of "ho ho ho's" is that they cannot make  
19 more than a single sound when they exhale or inhale. Humans,  
20 in contrast, can chop up a single exhalation into multiple bursts  
21 of "ha ha ha" – or words. (Speech results from chopping up an  
22 exhalation into separate sounds.) "Laughter," says Provine, "is a  
23 probe into such fundamental questions as why humans can speak  
24 but other apes can't." No humanlike laughing, no speaking.

25 But what do titters communicate? Some clues come from  
26 Provine's collection of 1,200 "laugh episodes," from  
27 **eavesdropping** in public places. He finds that speakers laugh  
28 more than listeners, and women laugh at men more than vice  
29 versa. Laughter ... ( VI ) ... to signal an attempt to ingratiate  
30 oneself: in India, notes Provine, men of lower castes giggle  
31 ... ( VII ) ... addressing men of higher castles, but never  
32 **the other way round**. People in power seldom giggle. More  
33 evidence that laughing has less to do with humor than with  
34 social signals is that, in Provine's 1,200 samples, by far the  
35 remarks that most often elicited laughter were of the "it was  
36 nice meeting you, too" or "I know" variety. In other words, witless.  
37 "Laughter is only rarely a response to jokes," says Provine. "It  
38 solidifies relationships and pulls people into the fold."

39 Laughter seems intimately ... ( VIII ) ... with our physiology.  
40 It blocks a neural reflex that regulates muscle tone, proving  
41 that "going weak with laughter" is more than a metaphor. Tumors  
42 or lesions of the brain's hypothalamus, ... ( IX ) ... regulates  
43 basic processes like respiration, can cause bouts of uncontrolled  
44 laughter. And although laughter seems to have evolved because  
45 of the message it sends to others, it may have a therapeutic  
46 effect on the laughter, too: it can raise heart rate as much as  
47 aerobic exercise, lessen the perception of pain and increase  
48 tolerance of discomfort.

(Adapted from *Newsweek*)

## VOCABULÁRIO

As questões de 21 a 28 referem-se ao texto cujo vocabulário se segue:

- laughs/laughters= risos
- to scan= explorar, examinar, sondar
- brains= cérebros
- to eavesdrop= bisbilhotar
- chimps= chimpanzés

- *researchers*= pesquisadores
- *to figure out*= entender
- *to chuckle*= dar risinhos
- *to guffaw*= gargalhar
- *to crack up*= matar-se de rir
- *hint*= dica
- *funny*= engraçado
- *thinkers*= pensadores
- *to fathom*= compreender
- *to fear*= temer, recear
- *to disrupt*= desintegrar, romper
- *to arise*= aumentar
- *surprising*= surpreendente
- *punch line*= parte final da piada, onde está a graça
- *to work*= funcionar
- *lately*= ultimamente
- *though*= contudo
- *band of researches*= uma porção de pesquisas
- *to remedy*= curar, remediar
- *to probe*= examinar, sondar
- *to tickle*= fazer cócegas
- *paroxysms of laughter*= ataques de riso
- *to tackle*= lidar com
- *behavior*= comportamento
- *roots*= raízes
- *likely*= provavelmente
- *to pant*= ofegar
- *to inhale*= inspirar
- *to exhale*= expirar
- *to realize*= perceber, compreender
- *reason*= razão
- *a string of*= uma série de
- *to chop up*= separar, cortar
- *bursts*= rajadas
- *speech*= fala
- *apes*= macacos
- *titters*= risos sufocados, abafados
- *clues*= pistas
- *attempt*= tentativa
- *to ingratiate oneself*= engrajar-se
- *lower castes*= castas inferiores
- *to giggle*= dar risada
- *the other way round*= ao contrário, de outro modo
- *samples*= amostras
- *by far*= sem dúvida, de longe
- *remarks*= observações
- *witless*= estúpido, tolo
- *jokes*= piadas
- *bouts*= ataques, acessos
- *to evolve*= evoluir
- *to raise*= aumentar
- *heart rate*= ritmo cardíaco
- *as much as*= tanto quanto
- *to lessen*= diminuir
- *pain*= dor
- *to increase*= aumentar

As lacunas **I**, **III**, **VII** e **IX** devem ser preenchidas respectiva e corretamente por:

- a) that ; which ; where ; what
- b) what ; whom ; that ; where
- c) where ; who ; whose ; whose
- d) which ; whose ; when ; which
- e) who ; that ; which ; that

**Resolução**

- **which** = pronome relativo: *que (coisa)*
- **whose** = pronome relativo: *cujo (posse)*
- **when** = *quando (tempo)*
- **which** = pronome relativo: *que (coisa)*

**22 e**

As lacunas **II** e **IV** devem ser preenchidas respectiva e corretamente por:

- a) are trying ; is turning
- b) tries ; was turned
- c) is being trying ; turns
- d) has trying ; turned
- e) has been trying ; have turned

**Resolução**

- **has been trying** = *vem tentando; Present Perfect Continuous: ação que começou no passado e se estende até o presente.*
- **have turned** = *recorreram a; Present Perfect: tempo indefinido no passado.*

**23 e**

As lacunas **V**, **VI** e **VIII** devem ser preenchidas respectiva e corretamente por:

- a) don't resemble ; seem ; entwines
- b) isn't resembling ; has seemed ; entwining
- c) aren't resembling ; have seemed ; was entwined
- d) didn't resemble ; isn't seeming ; entwine
- e) doesn't resemble ; seems ; entwined

**Resolução**

- **doesn't resemble** = *não parece: Simple Present*
- **seems** = *parece: Simple Present*
- **entwined** = *entrelaçado, misturado*

**24 c**

According to the text, if you **fathom** (line 02) something:

- a) you feel bitter or indignant about it and often express this in what you say or how you behave.
- b) you say that you will have nothing to do with it.
- c) you understand it as a result of thinking carefully about it.
- d) you speak critically about it because you disapprove of it.
- e) you make it clearer and more detailed in your mind, usually by speaking or writing about it.

**Resolução**

• **to fathom**= *entender, compreender*

**25 a**

According to the text, if you **eavesdrop** (line 27):

- a) you listen to what other people are saying without them knowing that you are doing so.
- b) you mean that you are unable to say anything because someone else is talking so much.
- c) you repeat words or sounds which the other person has just said or made.
- d) you express an opinion rather than stating facts, especially in an article which is supposed to be reporting facts rather than giving opinions.
- e) you take action in a situation that did not originally involve you, especially in order to prevent conflict between two people or groups.

**Resolução**

• **to eavesdrop**= *bisbilhotar*

**26 b**

O significado da expressão **the other way round** (linha 32) no texto é:

- a) às vezes
- b) ao contrário
- c) de cabeça para baixo
- d) ao redor
- e) da mesma maneira

**Resolução**

• **the other way round**= *ao contrário*

**27 d**

O texto deixa claro que:

- a) O som do riso emitido por um chimpanzé é exatamente igual ao som do riso humano.
- b) Ouvir a conversa das pessoas bloqueia o reflexo neurológico do hipotálamo, forçando a pessoa a rir quando o assunto é engraçado.
- c) Se os macacos podem rir hoje, eles deverão, no futuro, ter a capacidade de falar caso sejam estimulados.
- d) Os homens riem das mulheres menos que as mulheres riem dos homens.
- e) Robert Provine acredita que Platão e Aristóteles tinham a resposta para o fenômeno do riso.

**28 b**

De acordo com o texto, conclui-se que:

- a) A medicina estuda a importância do bom humor e dos sentimentos positivos. O médico Robert Provine está desenvolvendo uma pesquisa na Universidade de Maryland, baseado no ditado popular : "rir é o melhor remédio."
- b) Boas risadas podem ter o efeito de uma sessão de ginástica (quando o ritmo cardíaco se acelera),

- sendo capazes ainda de amenizar a sensação de dor e de desconforto.
- c) Estudos realizados com 1.200 pessoas comprovam que a risada em excesso reduz a liberação dos hormônios, enfraquecendo todas as defesas do organismo, com um menor bombeamento de sangue promovido pelo coração.
- d) A idéia de que o humor pode servir de tratamento médico é antiqüíssima. Platão dizia que a alegria dilatava e aquecia o organismo; Kant, ao contrário, afirmava que a gargalhada contraía e esfriava o corpo.
- e) As investigações sobre as contribuições do riso para a saúde são relativamente novas. O neurocientista Robert Provine afirma em seu livro "Laughter: A Scientific Investigation" que os doentes submetidos às sessões de risada recuperam-se mais rapidamente. Os chimpanzés, por outro lado, mesmo doentes, não se recuperam com essa prática.

**29 a**

Indicate the alternative that best completes the following sentence.

**"If I \_\_\_\_\_ my raincoat, I \_\_\_\_\_ a cold."**

- a) had worn - wouldn't have gotten  
b) wear - would have get  
c) didn't wear - wouldn't have get  
d) am wearing - would have gotten  
e) hadn't wear - couldn't have get

**Resolução**

• If I **had worn** my raincoat, I **wouldn't have gotten** a cold= Se eu **tivesse usado (colocado)** minha capa de chuva, eu **não teria pegado** resfriado.  
Oração condicional (tipo 3): Past Perfect (had worn) + Conditional Perfect (wouldn't have gotten)

**30 c**

Indicate the alternative that best completes the following sentence.

**"Paulo knows how to drive a truck and \_\_\_\_\_."**

- a) Mark does neither  
b) either does Mark  
c) so does Mark  
d) nor does Mark  
e) Mark does either

**Resolução**

Paulo knows how to drive a truck and **so does Mark**= Paulo sabe dirigir caminhão e **Mark também**.  
so + verbo auxiliar + sujeito= estrutura usada para ligar frases positivas.

Why Do We Laugh? Laughter makes up a surprisingly large part of our lives, and that's certainly not a bad thing. It's a fantastic stress reliever and has the power to brighten an otherwise miserable day. Whether it's chuckling at a joke in a sitcom or sharing a few laughs with our friends, laughter comes to us very naturally. The question that faces us then is: Why do we laugh? And what goes on in those huge brains of ours when we're cracking up? To start with, let's address the act of laughing itself. What is Laughter? Credit: Sergey Furtaev/ Shutterstock. Laughter is essentially a person's response. Why exactly do we laugh? The easiest answer is "because something is funny," but how true is that, actually? Think about the last time you laughed with your boss—was it because they dropped a huge knee-slapper or was it a little forced? Alternatively, think about the last time you re-watched your favorite sitcom. You may inherently know a joke is funny, but sitting on your couch in a room by yourself, you may not even crack a smile. Before we can really examine the science behind laughter, we will first have to qualify exactly what type of laughter that we're looking at. Think about it—in some of the examples above, are you really laughing the same way at your boss's joke as you are at your favorite television show? Laughing in the presence of others indicates the interaction is safe, the researchers explain. While the norms of most social groups prevent direct, unambiguous acts of aggression and dominance, the use of laughter may free individuals to display dominance because laughter renders the act less serious. In the first study, the researchers wanted to know whether high- and low-status individuals actually do laugh differently. For example, in a study published in *Psychological Science*, the researchers looked at the effect of psychological distance in terms of time. Inspired by the classic Mark Twain quote, "Humor is tragedy plus time," the research team investigated how the passage of time can influence one's perception of an event as funny or painful. People laugh very-very frequently. Robert Provine back in the US has found that if you ask people "When do you laugh? What do you laugh at?" people talk about jokes, and humor, and comedy. If you look at people, what you find is that they laugh when they are with other people, it's a social behavior. Most laughter is not found at humor per se, it's found in conversations, it happens when people are talking to each other. And he also found that within those conversations most of that laughter is still not at jokes—people laugh at comments and statements like "I'll have another cup of coffee." People laugh about five times in every 10 minutes of conversation. They are also 30 times more likely to laugh when they are with other people compared to when they are alone. It's common to think of laughter as a loud reaction to a funny joke, but most of the time it's simply a recurring feature of normal social interaction. Sophie Scott is a scientist and professor at University College London who leads much of the current research about laughter. The science of laughter is far from complete. For one thing, it's still not clear why particular words or scenes trigger laughter. Many theories exist, including the idea that material is funny when it violates our expectations, but no single theory of humor seems entirely satisfying.