The Telephone Translation Game: An Illustration of Translation Challenges

By Douglas J. Strock

We all remember sitting in a circle and playing the “telephone” game as children. The first child whispers a sentence to the next child and so on until the last child announces the mangled result and everyone laughs. This article uses a similar process to amplify the effects of mistranslations in clinical research documents. We started with two paragraphs from a hypothetical English-language informed consent form. We then used non-medical translators to translate the text from German to Chinese to Russian and finally back to English:

**English Version #1**

You are being asked to participate in this study because you have been diagnosed with alopecia (hair loss) of the scalp. The purpose of this study is to determine if an experimental “study drug,” a patch containing capsaicin, is safe and effective when given to people with your condition. An experimental drug is one that has not received approval by the U.S. Food and Drug Administration (FDA).

Capsaicin is a man-made version of a peppery substance found in chili peppers. Low-concentration capsaicin creams and patches are available without prescription for controlling pain from arthritis (swelling of the joints), back pain and painful muscle soreness. However, it is unknown if the experimental patches containing 10 to 20 times higher concentrations of capsaicin will be helpful in reversing alopecia. It is also unknown if any hair growth that results from treatment will be temporary or permanent.

**German Version**


Capsaicin ist eine von Menschen geschaffene Version einer pfeffrigen Substanz, die in Chilischoten zu finden ist. Salben und Pflaster mit Capsaicin in geringer Konzentration sind rezeptfrei zur Behandlung von durch Arthritis (Gelenkschwellungen) verursachten Schmerzen, Rückenschmerzen und schmerzhaftem Muskelkater erhältlich. Es ist jedoch unbekannt, ob die experimentellen Pflaster mit ihrer 10- bis 20-fachen Konzentration an Capsaicin dabei helfen, Alopezie rückgängig zu machen. Weiterhin ist unbekannt, ob der durch die Behandlung hervorgerufene Haarwuchs vorübergehend oder dauerhaft sein wird.

**Chinese Version**

因为你有秃头(脱发)的症状，特邀请您参与kopfhaars的这项诊断研究。在此基础上，对您使用可控制的、安全、活性成分辣椒素和修补术研究以解决您及正在受该病症痛苦困扰的人们，以确定是否采取“药物姓”实验！实验性药物，是一种还没有得到美国食品和药物管理局（美国FDA）认证、批准的药物

辣椒素是人工制作、能够从辣椒中萃取的辣味物质。药膏及低浓度辣椒素是有用的！这一实验可能会引起关节炎（关节肿胀）、引起疼痛、背部疼痛、和肌肉疼痛。当然，不知道是否需要进行10至20次辣椒素集中试验才有助于秃头症。也不知道对于头发的治疗的有效性是临时性的还是永久性的。
Russian Version

Поскольку у вас проявляются симптомы облысения (выпадения волос), приглашаем вас принять участие в диагностическом исследовании компании Kopfhaars, которое заключается в проведении на вас эксперимента с контролируемым применением безопасного активного вещества «капсаицин» и проведении пластической операции. Эксперимент ставит своей целью облегчение ваших страданий и страданий других людей, возникающих в результате облысения, а также послужит для принятия решения о необходимости проведения медикаментозного эксперимента.

Экспериментальные лекарственные препараты – это такие медикаментозные средства, которые еще не прошли освидетельствование и не были утверждены Американским управлением по продовольствию и лекарствам (US FDA).

Капсаицин - это искусственно созданное вещество с острым вкусом, которое добывается путем экстрагирования из красного перца.

Используется мазь со слабой концентрацией капсаицина. Побочным эффектом эксперимента может быть воспаление (опухание) суставов, болезненные ощущения, боль в области спины, а также мышечная боль.

Очевидно, что длительность применения препарата в рамках эксперимента до возникновения положительного эффекта в лечении облысения не определена и количество применений может варьироваться от 10 до 20 раз.

Также неизвестно, будет ли положительный эффект для лечения волос краткосрочным либо длительным.

English Version #2

If you have symptoms of alopecia (baldness) we invite you to take a part in Kopfhaars’ diagnostic research that consists in experimenting on you with controlled use of safe active matter “Capsaicin” and plastic surgery. The objective of the experiment is a relief of your suffering and suffering of other people arising as a result of alopecia, and also will help to make a decision about the necessity of the drug experiment.

Experimental medications are drugs that are not yet approved by the US Food and Drug Administration (US FDA).

Capsaicin is an artificially made spicy substance that is obtained by method of extraction from red pepper (paprika).

In the experiment is used ointment with low concentration of capsaicin. The side effects of the experiment might be inflammation (swelling) of joints, back pain, and also muscle pain. Apparently, the duration of the drug use in the scope of experiment before you see the positive effect in alopecia treatment is not defined, and quantity of applications might vary from 10 to 20 times. Also it is not known if the positive effect in alopecia treatment will be short or long term.

Changes in the Translations

Before comparing the words in the first and last English versions, we notice that the number of lines in the text ranged from six to 20. Long informed consent forms can thus get even longer in other languages.

Here again is the text of the final version, with commentary on significant changes:

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use of safe active matter “Capsaicin” and plastic surgery. The objective of the experiment is a relief of your suffering and suffering of other people arising as a result of alopecia, and also will help to make a decision about the necessity of the drug experiment.

“This study” turned into “Kopfhaars’ diagnostic research” because the German translator introduced the term “Kopfhaars,” which is the literal German term for “head hairs.” Because the Chinese translator could not find an equivalent term, it became a proper noun in that and subsequent translations.

“Participate in this study” became “experimenting on you,” perhaps more accurate, but a tougher proposition for subject recruiting.

The study purposes of determining safety and effectiveness became a statement that the study drug is safe.

The condition of alopecia became a malady that one suffers from.

The experimental purpose of the study became treatment, plus deciding whether the study should be conducted in the first place.

Capsaicin is an artificially made spicy substance that is obtained by method of extraction from red pepper (paprika).

The main ingredient, capsaicin (the spicy hot chemical in chili peppers) became paprika, which is not spicy hot at all.

The original text did not specify how capsaicin is man-made. The final text says it is extracted from “red pepper (paprika)”. In the U.S., “red pepper” is obtained from chili peppers, not paprika.

In the experiment is used ointment with low concentration of capsaicin. The side effects of the experiment might be inflammation (swelling) of joints, back pain, and also muscle pain. Apparently, the duration of the drug use in the scope of experiment before you see the positive effect in alopecia treatment is not defined, and quantity of applications might vary from 10 to 20 times. Also it is not known if the positive effect in alopecia treatment will be short or long term.

A high concentration of capsaicin in a patch became a low concentration in an ointment.

The current medical indications for use of capsaicin – inflammation (swelling) of joints, back pain and muscle pain – became side effects of the study drug.

The concept of study treatment period was introduced and it became “not defined.”

**Discussion**

The telephone translation process amplified the effects of mistranslations. Nevertheless, similar errors can occur in normal informed consent form translations. Some of the errors may have been straight translation errors, but many of them were caused by limitations and nuances in the languages and probably cultural differences as well. We can conclude from this exercise that all translations should be made from the original language. Also, translation errors can be minimized with simple, clear writing in the first place, qualified medical translators, and back-translation (from the translated document back to the original document) for quality control.
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