

# A senior citizen's self-management of positive and negative inner behaviours\*

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This investigation evaluated a senior citizen's self-management of positive and negative inner behaviours, namely thoughts and feelings. Throughout the course of the study every instance of positive and negative inners per day was counted, recorded and charted on a Standard Celeration Chart. Following baseline (Condition A), the initial intervention strategy involved the introduction of timed counting procedures, varying between 30-seconds and 1-minute in duration, during which the participant was instructed to free/tally as many positive inners as possible (Condition B). Resultant data led to the implementation of response-prompt practice and assessment procedures (Condition C), which included SAFMEDS and a personalised response-prompt worksheet designed by the participant for use during daily 1-minute counting periods. Behaviour maintenance was determined by a return to baseline (Condition A) and subsequent follow-up assessment (Condition D). The main finding was that response-prompt procedures (Condition C), particularly the personalised response-prompt worksheet, proved most effective in increasing the frequency of positive inners, both during daily 1-minute counting periods and throughout the day, whilst reducing the frequency of daily recorded negative inners. The implications of these findings in relation to future research and applications are discussed.

DESCRIPTORS: Inners, inner behaviour, elderly, behavioural gerontology, SAFMEDS, counting periods

The recurrent theme of inner behaviour research, as evidenced in the growing literature, has been the overwhelming effectiveness of what is, essentially, a fairly simple exercise of self-management. By increasing our awareness of those thoughts and feelings that have the potential to both provide assurance and inner well-being alongside those that, in the long-term, are potentially harmful and may upset the equilibrium, general "mental well-being" can be achieved. Research has repeatedly demonstrated how this skill can pay substantial dividends in terms of "inner" health (Duncan, 1971; Conser, 1981; Calkin, 1981, 1992, 2001; Cooper, 1991; McCrudden, 1989; Kostewicz, Kubina & Cooper, 2000).

Nevertheless, despite the increasing popularity of inner behaviour research in recent years and the sentiment that precision teaching (PT) is ubiquitous in its application across the ages (White, 1986), it is surprising that there has been relatively little attempt to broaden its application to a population for whom the potential benefits are great - the elderly.

Statistics are often interpolated into discussions concerning elderly mental health. For example, elderly suicide rates in the United Kingdom are particularly worrying. The highest rate of suicide for any age group is amongst men aged 75 and over, research indicating that 60-90% of suicides and attempts are made following symptoms of depression, pain and feeling unwell (Social Services Inspectorate, 1997).

In highlighting the effects of a growing global elderly population, Kubina, Haertel, and Cooper (1994) first pointed out the huge potential

for an amalgamation of inners research and behavioural gerontology. However, despite their findings and recommendations, no one has followed their lead. The reasons for this apparent research caution can only be speculated, but are possibly not dissimilar to those that have beleaguered the behavioural gerontological world for some time (Carstensen, 1988).

In view of the above considerations, the purpose of this study was to examine and evaluate the effectiveness of a senior citizen's self-management of positive and negative thoughts and feelings using a variety of PT-directed behavioural strategies.

## METHOD

### *Participant*

The participant was a female aged 66 years who, for the purpose of this study shall be called "Kathy." Kathy required assistance in daily living throughout the day because of a number of medical conditions, including hypertension, arthritis, and severe back pain, the latter of which greatly impeded mobility. Owing to reports of increasing tendencies to focus upon the negative aspects of life, often in the form of negative thoughts and feelings about herself and situations in which she found herself, Kathy willingly agreed to take part in the investigation.

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### Setting

Introductory instruction meetings concerned with data collection and plotting, and follow-up meetings took place in Kathy's home. The actual recording of inner behaviour was carried out wherever Kathy was throughout the day when she experienced those behaviours, be it in the home, car, and so on.

### Definition of Target Behaviours

Both positive and negative thoughts and feelings were identified as the target behaviours of this investigation.

As with all inner behaviour, the exact nature of the target thoughts and feelings experienced was specific to Kathy, thus preventing the construction of a definitive list of the behaviours to be recorded. However, as a guide, positive feelings were defined as pleasant emotional states, often accompanied by a physical sensation related to the feeling. Examples might include "I feel intelligent/pretty/independent/happy/etc.;" "I'm excited"; "I did a really good job", whilst positive thoughts were positive self-observed ideas not accompanied by a physical sensation as to suggest the individual's own conviction in the thought. To illustrate, examples of positive thoughts include "I am intelligent/beautiful/happy/etc.;" "That's a pretty picture"; "It's a nice day."

Negative feelings were identified as unpleasant emotional states accompanied by a corresponding physical sensation. Examples of negative feelings include "I feel stupid/ugly/unhappy/etc.;" "I'm fat"; "I've really messed things up this time"; "No one cares about me." On the other hand, negative thoughts were defined as negative self-observed ideas not accompanied by a physical sensation as to suggest the person's own conviction in the thought. Such negative thoughts might include "I am incompetent"; "What a wet and miserable day"; "That's such a mess."

### Measurement

The first learning channel set used by Kathy was "free/tally," wherein Kathy was required to freely think of positive and negative thoughts and feelings that were then "tallied" using a notebook and pen. Consequently, Kathy obtained a record of the number of times both positive and negative thoughts and feelings were experienced each day (Conditions A & B), either throughout the course of the day or during timed counting periods (i.e., 1-minute; 45-seconds; 30-seconds). With the introduction of the second intervention phase (Condition C), and the utilisation of the positive thoughts and feelings SAFMEDS cards and its

derivative personalised response-prompt worksheet, the "see/say" learning channel was adopted, wherein Kathy was instead required to read aloud the positive inners printed during the counting periods. Kathy used a digital kitchen timer to accurately measure the counting periods used and all data obtained was plotted on a personalised Standard Celeration Chart (SCC).

## PROCEDURE

*Condition A.* The purpose of this phase of the investigation was to ascertain a steady rate of responding for Kathy in terms of the number of positive and negative thoughts and feelings experienced each day. In this instance the baseline phase lasted 14 days, by which time a steady target behaviour frequency was established.

*Condition B.* In addition to the recording of both positive and negative thoughts and feelings throughout the day Kathy carried out a daily 1-minute timing wherein for every positive thought and/or feeling experienced during the timing period she was asked to make a tally mark (free/tally learning channel), the objective being to think of as many positive thoughts and feelings in 1-minute and thus achieve the aim set at 50-75 positive thoughts and feelings per minute. Though the 1-minute counting period was used initially, data obtained led to the counting period being reduced to 30-seconds, after which a number of variations in the counting periods were introduced to facilitate the free/tally of positive inners.

*Condition C.* As in Condition B, Kathy recorded both positive and negative thoughts and feelings throughout the day. However, in this instance the daily free/tally 1-minute timing of positive thoughts and feelings was initially replaced by a see/say 1-minute timing of positive thoughts and feelings using SAFMEDS (Say All Fast a Minute Each Day Shuffle) cards. On each card a positive thought or feeling specific to Kathy was printed. During 1-minute timings Kathy was required to see/say as many SAFMEDS as possible until aim was consistently met. After a period of time the contents of the SAFMEDS cards were condensed onto a single A4 worksheet, and the learning channel set changed to see/silent read.

No restriction was placed on the number of times this part of the intervention could be carried out each day. Thus, Kathy was free to repeat the see/say or see/silent read exercises as many times as she wished; increased practice was entirely optional. In such cases the greatest number of SAFMEDS responded to in an individual 1-minute counting period was recorded on the SCC for each day. For example, in a day where the minimum

and maximum number of SAFMEDS responses per minute is 45 and 77 respectively, the data plotted for that day would be 77.

*Condition A.* With the withdrawal of positive inners 1-minute timings, Kathy returned to the baseline procedure wherein only the number of positive and negative inners experienced throughout the course of each day was recorded. This phase lasted 36 days.

*Condition D.* After an interval of 36 days, during which no data was collected, a follow-up assessment to determine behaviour maintenance/retention was carried out over a period of 27 days. The procedure outlined in Condition A above was followed.

## RESULTS

*Condition A.* Charts 1 and 2 show the occurrence of positive and negative inners for Kathy throughout the entire study. During Condition A (Chart 1) the frequency of positive inners ranged from 39 to 76 per day (mean = 47.8) with a celeration value of +1.15 whilst the frequency of negative inners ranged from 68 to 83 per day (mean = 75.4), decelerating at +1.1. Aside from one day when the number of positive inners exceeded negative inners experienced (positive = 76; negative = 68), negative inners were consistently higher than positive inners.

*Condition B.* Under this condition timed counting periods were introduced. Though positive inners accelerated at x6.25 (from 8 to 50) during this 11-week intervention phase, this was the product of a number of counting period changes. For instance, initially, the 1-minute counting period was used, however, given the celeration value of x1.0 after 14 days, the counting period was reduced to 30-seconds. This, followed by a number of variations in the counting periods used, ultimately resulted in the overall x6.25 celeration value.

In terms of the effect of the counting periods upon positive and negative inners recorded daily, after the first day, between Conditions A and B, positive inners had accelerated by x1.25, from 39 to 49 per day, whilst negative inners decelerated by +1.4, from 75 to 55 per day. However, by the end of Condition B positive inners had accelerated by x2, with a frequency spread of 49 to 96 per day, whilst negative inners had accelerated by x1.2, from 55 to 67 per day.

*Condition C.* With the introduction of SAFMEDS, one day into Condition C the frequency of positive inners recorded during the 1-minute counting period had accelerated by x1.3, from 50 to 64 per minute. A steady acceleration of responding during the daily counting periods was

further reflected in the x1.9 celeration value obtained by the end of Condition C.

Initially, both daily recorded positive and negative inners accelerated by x1.3 (positive - from 96 to 129; negative - from 67 to 87). However, Charts 1 and 2 clearly illustrate that by the end of Condition C negative inners had decelerated by +3.0, from 87 to 30 (range = 27-87), whilst the acceleration in positive inners made prior to the introduction of the response-prompt procedures continued throughout Condition C, accelerating at x1.8, from 129 to 227 (range = 123-229).

*Condition A.* Chart 2 shows the occurrence of positive and negative inners during the remainder of the study (Condition C continued, Condition A, and Condition D). Though little significant change in the frequency of positive and negative inners recorded throughout the day was experienced initially following the return to baseline (x1.0 and +1.1 respectively), by the end of the condition positive inners had accelerated by x1.3, from 236 to 305 per day whilst negative inners decelerated by +4.5, from 27 to 6 per day (Chart 2).

*Condition D.* After a 36-day interval during which no data was collected the follow-up assessment was carried out. As illustrated in Chart 2, during this 27-day period positive inners accelerated at x1.1 (range = 295-319) with a mean of 305 positive inners per day, whilst negative inners had a static celeration value of 1.0 (range = 17-23) and a mean of 21 negative inners per day.

## DISCUSSION

During the course of this self-management of positive and negative thoughts and feelings, positive inners recorded during the daily 1-minute counting periods accelerated by x15.0 (range = 8-119). The effect upon inners recorded throughout the course of the day was that positive inners accelerated by x7.0 (range = 45-319 per day) whilst negative inners decelerated by +5.0 (range = 17-83 per day). These results clearly show that of the two interventions used by Kathy to increase the frequency of positive inners whilst decreasing the frequency of negative inners the personalised SAFMEDS-based response-prompt worksheet proved most effective.

Though the free/tally positive inners intervention (Condition B) did produce a significant acceleration of positive inners during the various counting periods, its effect upon positive and negative inners recorded throughout the day was much less impressive. During this condition, and particularly during the longer counting periods (>30 secs.) Kathy, experienced great difficulty trying to think of as many positive

# Chart 1

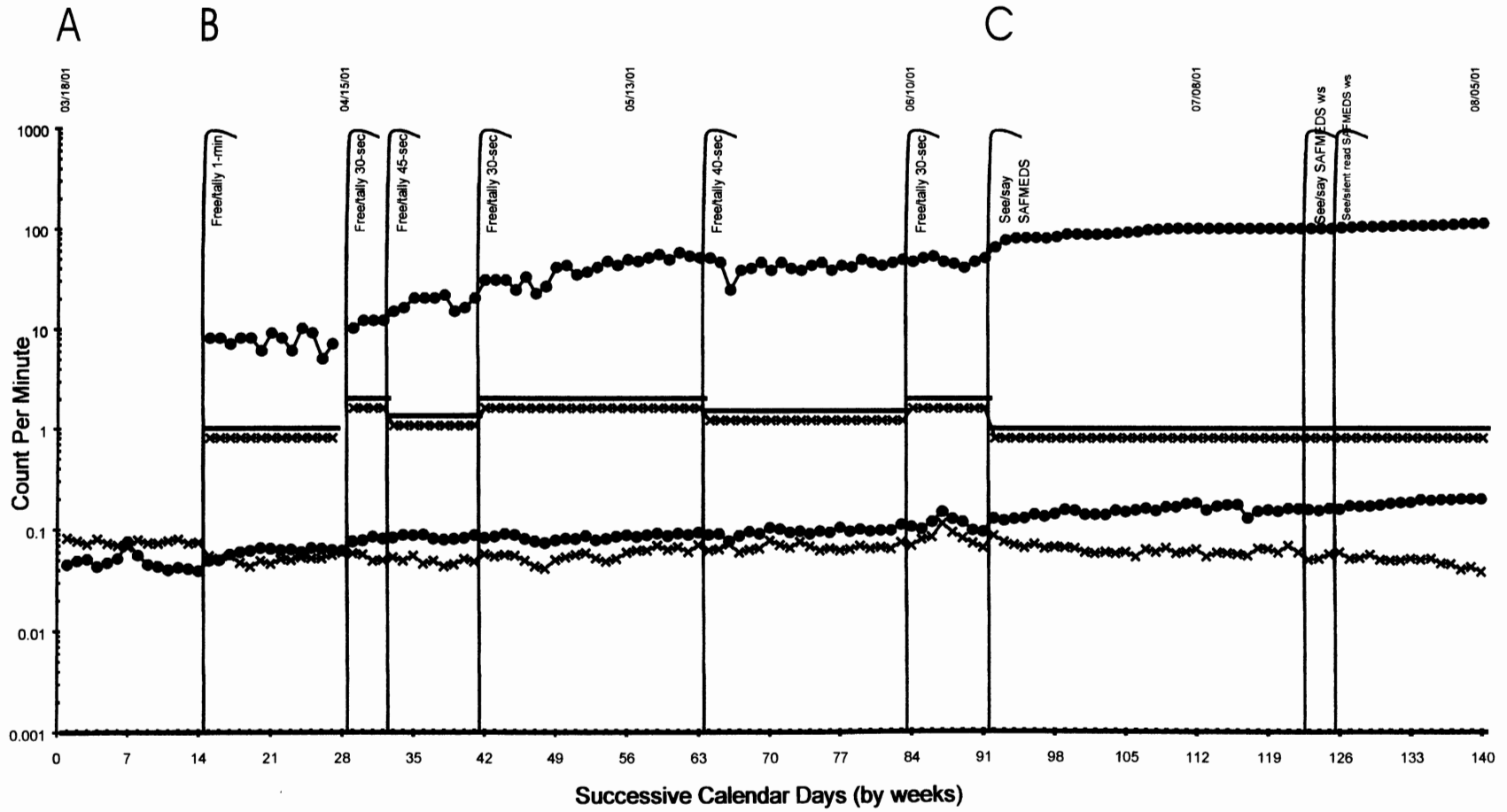
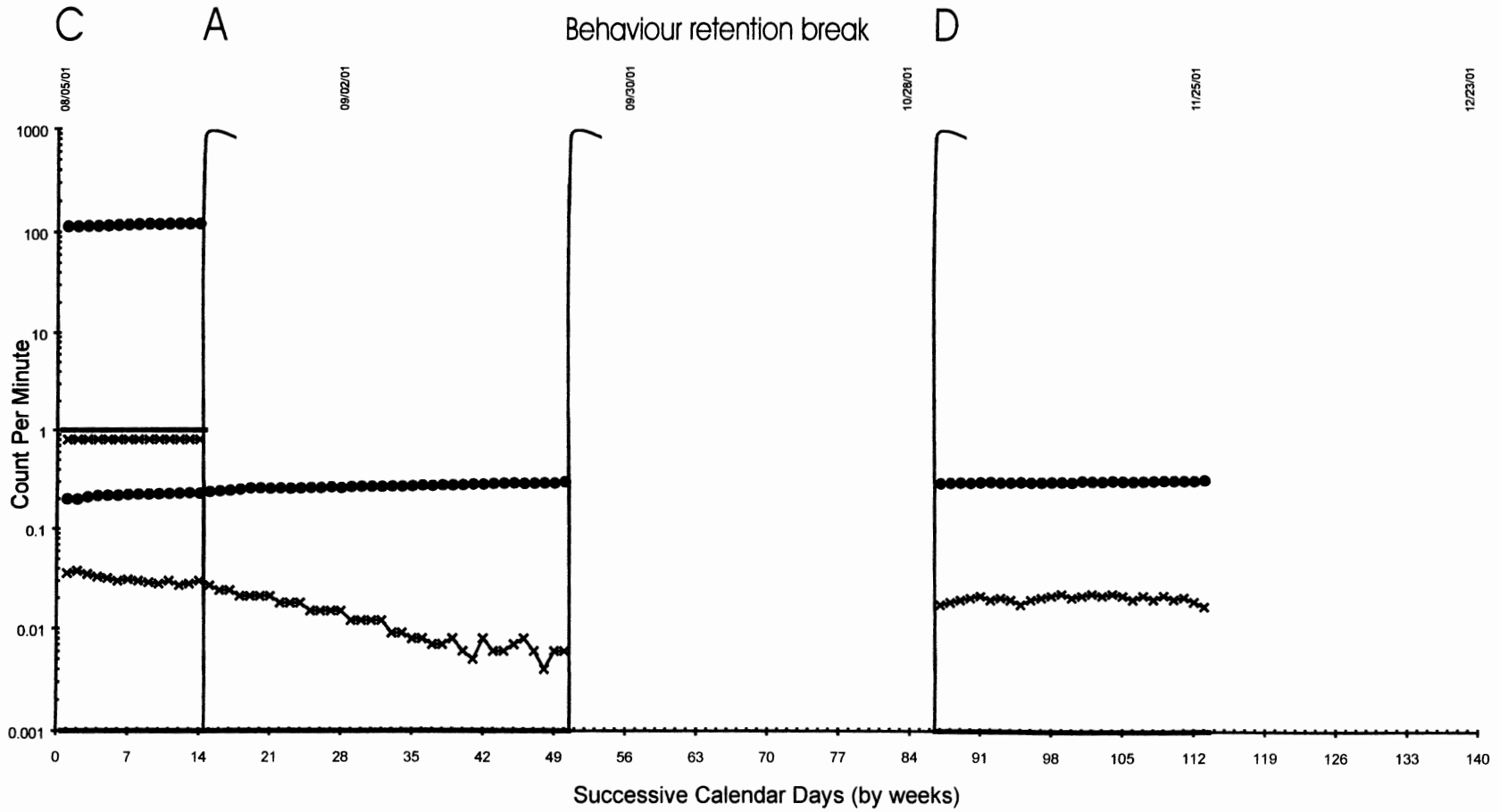


Figure 1

# Chart 2



Behaver: Kathy

Target: Positive and negative inners

Figure 2

thoughts and feelings as possible, hence the various changes in the duration of the counting periods used. However, though attempts were made to gradually increase the duration of the counting periods to the maximum of 1-minute, the frequency of positive thoughts tallied during these times tended to decrease. Other, more general explanations for the ineffectiveness of Condition B might include deterioration of recall due to increasing age and fewer social opportunities due to immobility.

The SAFMEDS-based response-prompt procedures (Condition C) produced not only an increase in the frequency of positive inners either spoken or silently read during the daily 1-minute counting periods but also much less erratic responding, the acceleration being steadily dramatic. This effectiveness was clear one day into Condition C when the frequency of positive inners recorded during the 1-minute counting period accelerated by  $\times 1.2$ , from 50 to 64 per minute. And, as time progressed it became quickly apparent that the SAFMEDS cards were having the desired effect. This effect was later exemplified with the introduction of the SAFMEDS-based personalised response-prompt worksheet, which further accelerated the frequency of both daily and timed positive inners whilst dramatically reducing negative inner frequencies per day.

During the subsequent return to baseline (Condition A) it was evident that even with the withdrawal of Condition C, the effects of the SAFMEDS-based response-prompt worksheet on Kathy's positive and negative inners were maintained. In fact, negative inners decelerated quite dramatically whilst positive inners continued to steadily accelerate. It is clear that by this stage Kathy had become fluent in focusing upon more positive thoughts and feelings, aided by the prompts and practice provided in Condition C, to the point where negative inners seldom occurred.

Some 36 days after the return to baseline phase had ceased, the follow-up analysis (Condition D) indicated that though negative inners recorded throughout the day had increased slightly, perhaps due to the break in experimentation, positive inners continued to accelerate steadily. This illustrates how, even after such a long period where no data was collected and behaviour was not monitored closely, the behaviour learned had maintained. This supports the findings of Kubina, Haertel, and Cooper (1994) alongside the behavioural gerontological literature that has repeatedly highlighted the ability of older people to learn and benefit from behaviour management strategies.

In contrast to Calkin (1981), whose study

measured seven different behaviours and treated thoughts and feelings separately, this investigation had only two measures, namely positive thoughts and feelings and negative thoughts and feelings. Though there are advantages of such an analysis, time restraints ruled this out in this instance. However, as Calkin (1981) stated "To count that many inners at one time requires practice" (p. 10).

A further disparity between this examination of inners and that by Calkin (1981) is that in this instance no specific daily aims for the positive inners recorded throughout the day were set, though Kathy was aware of some of the general aims for positive inners during counting periods (i.e., free/write positive thoughts and feelings = 30-50 per minute; free/say positive thoughts and feelings = 50-75 per minute). Calkin believed that this procedural inclusion might have played a pivotal role in increasing positive inners. However, the findings of this study suggest that whilst such a procedural inclusion may be useful, it is not necessary. Rather, Kathy found that the return of information about her progress, both from the daily-recorded data and verbally from the experimenter, was intrinsically reinforcing, encouraging Kathy to strive to improve the frequency of positive inners each day.

In conclusion, though research findings suggest that "the behavioural community will benefit greatly from improving inner behaviour research methods, such as the one-minute counting period" (Kubina, Haertel & Cooper, 1994), inner behaviour research is continually shunned. However, in further demonstrating the applicability of inners research to the elderly population, whilst highlighting the potential of PT-directed SAFMEDS-based behavioural strategies in combination with counting periods, the findings reported here will contribute to this debate.

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