ChatGPT: What does it Mean for Language Centres?

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<u>ChatGPT</u> is an artificial intelligence chatbot developed by <u>OpenAI</u>. The chatbot specialises in realistic dialogue and was launched in November 2022. It has drawn a lot of attention (e.g. <u>The Guardian</u>, 2022) due to its detailed responses and articulate responses (<u>BBC</u>, 2022 & <u>New York</u> <u>Times</u>, 2022).

You need to access ChatGPT through a VPN in Hong Kong. However, this is relatively straightforward to do. Once you create an account, you get to a simple chatbot interface. You can then interact with ChatGPT by using natural questions and dialogue, such as you would use if chatting to a friend. Given its ability to use natural language, ChatGPT has great potential to be a language learner's assistant.

This article starts with a brief summary of how computer assisted language learning (CALL) has developed over the last few decades to bring us to this point in early 2023 where we have a chatbot that can have human-like conversations with the user. It then reviews some of the author's initial interactions with ChatGPT including writing answers to common assessment questions at university and writing a short email. The author further experimented with ChatGPT by asking it to give feedback on student scripts, and finally asked ChatGPT questions related to its use for language learning and related to plagiarism. This review ends with a discussion about the implications of students using ChatGPT and the possible actions that language centres can take to deal with this issue.

### Background

Computers began to be more widely used for language learning in the early 1980s with the advent of affordable computers in homes, schools and universities. With easy-to-use authoring software (e.g., <u>Hot Potatoes</u>, 1998), simple computer graded exercises could be created to practise vocabulary and grammar. The potential of these exercises to support language learning were highlighted by Godwin-Jones (2013). He pointed out that language learning apps could provide learners with an always available learning partner, personalized feedback, and interactive language games, all of which could help to enhance the learning experience. However, as anyone who has

practised a language using these types of exercises knows, there are a series of potential disadvantages including, the highly controlled practice, lack of creativity for the user, and the assumption that a computer graded question can only be right or wrong with no grey area.

With time, the capabilities of these exercises further developed, for instance with adaptive elements providing questions based on the learner's performance (e.g., <u>Freerice</u>, 2009), game elements such as achievement points and a leaderboard (e.g., <u>Duolingo</u>, 2012), and with the spread of faster internet speeds the addition of multimedia including images, audio and video. Tools such as Hot Potatoes have been replaced by more up-to-date tools such as <u>H5P</u>, and language learning has moved from standalone quizzes to fully online courses such as on MOOCs (e.g., Forrester, 2016) and other language learning platforms (e.g., Forrester, 2022a). Godwin-Jones (2019) noted that technology and digital tools such as social media, mobile apps, and online language communities could provide learners with opportunities for self-directed learning and personalisation. Despite these advances, the exercises are still dependent on the limited capabilities of the available technology and continue to display many of the drawbacks that were evident in the early days of CALL. Practice is still often highly controlled and is often limited to the type of exercises that can help practise vocabulary and basic grammar structures. Where there is more creative output from the learner, the automated feedback struggles to provide anything useful.

This is not to say that Web 2.0 applications have not been used for creative language output. I developed a news and views course based on a wiki in the first decade of this century (Forrester, 2010), and applications such as Google Docs, Microsoft 365 and Padlet are now widely used by language teachers, and all provide learners with opportunities for interaction with native speakers (Lai, 2021). Web applications also support the easy creation of multimedia by learner, and we can see podcasts and videos becoming increasingly common as an output in language assignments. However, all this production by a student is still largely dependent on a human to provide meaningful feedback. Peer feedback on content can be used to some extent, although in terms of feedback on language accuracy there are limitations (Ho, 2021). Therefore, the onus is put back on

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the teacher to provide feedback. When I started teaching in the 1990s, I would have 20 paper scripts to take home to mark and provide feedback on. Now, I have still have 20 scripts to provide comments on, but they are online. Plus a change.

Automated feedback has been available from the early days of CALL. Microsoft has had a <u>spell checker</u> built into word application from its inception, and it has been over a decade since the language centre where I work first put its <u>Common Error Detector</u> on its website and online applications such as <u>Grammarly</u> started. While these applications are all continually improving, they still face problems dealing with more complex language structures, or even basic spelling in unfamiliar contexts.

In more recent years, the use of translation tools has also improved vastly. While in the past tools such as <u>Google translate</u> often could only operate accurately at a word level, they are now capable of sentence and paragraph level translation to quite high degrees of accuracy (Van Lieshout & Cardoso, 2022). This has raised questions about their use in universities (Dorst, 2022). There are also other tools (e.g., <u>Quillbot</u>, 2017) that purportedly use cutting-edge AI technology and as a result create further challenges for the language teacher.

Finally, we have also seen Chatbots used for language learning. Kohnke (2022) discusses the use of chatbots as a supplemental tool for language learning. His "Pedagogical Chatbot" was designed to assist language learners with grammar and vocabulary practice through conversation. The chatbot was tested with a group of English language learners and the results showed that it was fairly effective in helping learners improve their language skills. Kohnke (2022) suggests that chatbots could be a useful tool for language teachers to use in the classroom.

I have also experimented with Chatbots in courses that I teach (Forrester, 2022b). While they have potential to answer some of the repetitive questions from students, the current chatbots that are available for teachers to author and embed in their courses are quite limited in their capability. They are usually based on a series of questions and answers, and while this can be quite extensive, as soon as the student goes off topic, then the chatbot will respond with "please rephrase your question". This ultimately leads to a frustrating experience, and a reduction in usage.

This brings us to ChatGPT. ChatGPT is different as it can be that personalised language partner giving intelligent feedback. It will provide feedback on the content and will correct the errors that are made with explanations. It has the advantage of being always available, providing practice and feedback, and it does not have the disadvantages of being restricted or limited in its scope and only providing controlled practice. In many senses it could be the perfect language learning partner. However, in the same way as an older sibling, a more proficient friend, or a paid for service can end up completing the assessment rather than only assisting, ChatGPT could also go too far and do all the work, therefore leading to a limited or zero learning experience.

#### **ChatGPT and Academic Essays**

I wanted to explore ChatGPT's capabilities relating to common assignment question types used in language centres in Hong Kong. In an EAP course, students are required to write a problemsolution essay with the topic in the last semester being 'Asian parenting styles'. The author entered the following into the ChatGPT.

# Write a Problem Solution Essay on Asian Parenting Styles. Use an Academic Style

Within a few seconds, ChatGPT started 'writing' the following response (Video 1).

#### Video 1

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			"Explain quantum computing in simple terms"	Remembers what user said earlier in the conversation	May occasionally generate incorrect information					
			"Got any creative ideas for a 10 year old's birthday?"	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content				4	
		-	"How do I n?ske an HTTP request	Trained to decline inappropriate	Limited knowledge of world and	_	-		*	
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# ChatGPT's response to problem solution essay prompt

The text generated by ChatGPT (Video 1) included 5 paragraphs and 293 words. While the text does mention the 'problems' of Asian parenting styles, including 'authoritarian', 'obedience' and 'emphasis on academic achievement', there are no 'solutions' mentioned. The style of the writing is quite formal, and the language use is highly accurate. There are clear topic sentences used in the second, third and fourth paragraphs.

One aspect that would be required if this was an essay to be submitted at our language centre is citations. The author therefore re-wrote the prompt to ChatGPT with this question: Write a Problem Solution Essay on Asian Parenting Styles. Use an Academic Style. Add Two Citations. Use APA Format

#### Video 2

#### ChatGPT's response to problem solution essay prompt with citations



The text generated in response (Video 2) was in a different style to the first response. Two paragraphs were generated, with the headings 'Problem' and 'Solution'. The problem covered academic achievement and obedience causing negative outcomes in children. The solution suggested that parents adopt a more balanced approach towards their children, for example, letting them follow their own interests. The writing style was still formal and was still highly accurate.

Two references were provided at the end of the essay. While APA stye had been requested, the provided style included numbering but also some features of APA. The first reference provided was a book by Amy Chua, <u>Battle Hymn of the Tiger Mother</u> (Penguin Random House, 2022). While

this is not really an appropriate source for an academic essay, it is a real source. The second reference looks at first glance like an academic source. There are author names, a journal, and volume and issue numbers. However, I was unable to find this article even after a lengthy search. One of the named authors, <u>Ronald P Rohner</u> is real and writes on the topic of Parent-child relations in cross-cultural perspective. The journal is also real (Journal of Cross-Cultural Psychology, 1970). However, the article, which was supposedly published in 2013, could not be found.

## **ChatGPT and Emails**

Next, the author decided to test ChatGPT's capabilities in email writing. Email writing is an assessment task in some courses, and generally involves solving problems or requesting information, and also writing in different tones, for example to a staff member at the same level, to a senior member of staff, and to an external client. As I was testing during the time of the 2022 World Cup, I did not think about testing ChatGPT on one of these workplace type topics, and instead I entered the following prompt:

Write an Email in an Informal Style about Last Night's Football Match

## Video 3

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[→ Log out		simple terms"	earlier in the conversation	incorrect information			
		"Got any creative ideas for a 10 year old's birthday?"	Allows user to provide follow-up corrections	May occasionally produce harmful instructions or biased content			
		"How do I make an HTTP request in Javascript?"	Trained to decline inappropriate requests	Limited knowledge of world and events after 2021			
		write <sup>1</sup> an email in an informal style	about last night's football match	1	>		¥

ChatGPT's response to informal email prompt

The content of the response (Figure 3) matched the instructions, with language and level of

formality also correct. The vocabulary included phrases such as 'atmosphere was electric', 'on fire',

'nail-biting' and 'edge of my seat'. These are very high-level vocabulary items which would not

usually be seen by the usual tertiary level students seen in Hong Kong.

## **ChatGPT and Feedback**

The following feature that I tested was whether the Chatbot could provide feedback on text

that is entered. A sample podcast script, submitted as an assignment earlier that year, was copied

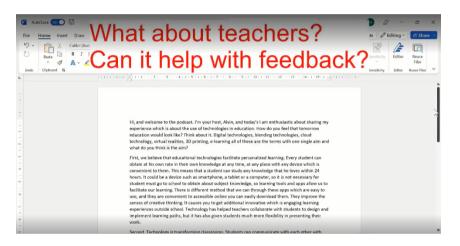
from a word document with the following prompt added at the end of the script. Note that the

original podcast script is not shown here for privacy reasons.

# Here is a Short Assessment of the Student Podcast Script

Video 4

# ChatGPT's response asking for feedback to podcast script



The text provided by ChatGPT (Video 4) gave a good summary of the script written by the

student. It then gave some suggestions about the text.

I further experimented with the feedback capabilities of ChatGPT by changing the prompt.

First I asked chatGPT to look at the grammar and punctuation of a sample text (Figure 1) which

contained deliberate errors.

# Give Feedback on the Grammar and Punctuation of the Student Script

## Figure 1

Original script provided to ChatGPT

One of the key similarities between two living styles is they are both good ways to enjoy the world. Physical needs aside, mental needs are more important for people nowadays. As people have enough food and clothes to handle freezing weather, they start to try to satisfy their mental needs. Some of them will looking for challenges. The others will try to relax and slow down their step and enjoy the view around them. They are the same as these are both the way to experience the world. *Give feedback on the grammar and punctuation of the student script:* 

## Figure 2

### ChatGPT feedback when asked to comment on grammar and punctuation

There are a few grammatical and punctuation errors in this script. Here are some suggestions for improvement:

- In the first sentence, "they" should be replaced with "these" to refer to "two living styles."
- In the second sentence, "mental needs are more important for people nowadays" should be "mental needs are more important for people nowadays."
- In the third sentence, "As people have enough food and clothes to handle freezing weather" should be "Since people have enough food and clothes to handle freezing weather."
- In the fourth sentence, "they start to try to satisfy their mental needs" should be "they start trying to satisfy their mental needs."
- In the fifth sentence, "The others will try to relax and slow down their step" should be "Others will try to relax and slow down their pace."
- In the sixth sentence, "They are the same as these are both the way to experience the world" should be "They are the same in that they are both ways to experience the world."

In general, the script could benefit from clearer and more concise language, as well as proper punctuation to improve its readability.

This response is too detailed and is not always accurate. It gives feedback at a sentence level and involves re-writing each sentence one by one. It does not give any reason behind the 'corrections'. However, reasons were not requested in the prompt.

I then modified the prompt by asking for feedback on the more common assessment criteria, content, organisation and language. The same original text was used (Figure 3).

# Give Feedback on the Content, Organisation, and Language of the Student Script

## Figure 3

# Original script provided to ChatGPT

One of the key similarities between two living styles is they are both good ways to enjoy the world. Physical needs aside, mental needs are more important for people nowadays. As people have enough food and clothes to handle freezing weather, they start to try to satisfy their mental needs. Some of them will looking for challenges. The others will try to relax and slow down their step and enjoy the view around them. They are the same as these are both the way to experience the world. *Give feedback on the Content, Organisation, and Language of the student script:* 

## Figure 4

# ChatGPT feedback when asked to comment on content, organisation and language

The content of this script is clear and concise, as it compares two living styles and highlights their similarities. However, the organization of the ideas could be improved. The script jumps from discussing physical needs to mental needs without a clear transition, and the discussion of the two living styles is somewhat brief and could be expanded upon.

In terms of language, there are a few errors in the script. For example, "mental needs are more important for people nowadays" should be "mental needs are more important for people nowadays" and "they start to try to satisfy their mental needs" should be "they start trying to satisfy their mental needs." Overall, the language could be clearer and more concise to improve the readability of the script.

Figure 4 shows the response that ChatGPT provided on these three areas. 'Content' feedback is a short summary of the content. Feedback on 'organisation' shows how the text is problematic. The feedback for Language is not always helpful with one line being said to be incorrect, but not being corrected.

I experimented once more by asking for feedback on different areas. The language centre where I work is experimenting with new marking criteria using Analysis, Clarity, Appropriacy and Persuasiveness. The same original text was used (Figure 5), and the feedback can be seen in Figure 10. Interestingly, this was perhaps the most useful feedback that was given.

Give Feedback on the Analysis, Clarity, Appropriateness, and Persuasiveness of the Student Script Figure 5

## Original script provided to ChatGPT

One of the key similarities between two living styles is they are both good ways to enjoy the world. Physical needs aside, mental needs are more important for people nowadays. As people have enough food and clothes to handle freezing weather, they start to try to satisfy their mental needs. Some of them will looking for challenges. The others will try to relax and slow down their step and enjoy the view around them. They are the same as these are both the way to experience the world. *Give feedback on the Analysis, Clarity, Appropriateness, and Persuasiveness of the student script:* 

## Figure 6

ChatGPT feedback when asked to comment on analysis, clarity, appropriateness, and persuasiveness

The analysis in this script is clear and concise, as it compares two living styles and highlights their similarities. However, the script could benefit from more in-depth analysis and exploration of the differences between the two styles, as well as the broader implications of these differences.

In terms of clarity, the script is generally easy to understand, but there are a few areas where the language could be improved. For example, "they start to try to satisfy their mental needs" should be "they start trying to satisfy their mental needs." Overall, the language could be clearer and more concise to improve the readability of the script.

The appropriateness of the script is somewhat limited, as it only briefly touches upon two living styles without providing much context or analysis. It would be more effective if the script provided more information about the specific living styles being compared and their broader significance. In terms of persuasiveness, the script does not attempt to persuade the reader of any specific viewpoint or course of action. It simply presents a comparison of two living styles and their similarities. To be more persuasive, the script could provide more evidence and analysis to support its claims and encourage the reader to take a specific action or adopt a particular perspective.

#### ChatGPT and Language Learning

I was curious about ChatGPT's response regarding how it could be used to support language learning in higher education. Its response can be seen in Figure 7.

#### Figure 7

ChatGPT's response when asked how it can be used to support language learning

There are several ways in which chatbots like OpenAI's GPT-3, or ChatGPT, can be used in higher

education to support language learning. Here are a few examples:

Conversation practice: Chatbots can be used to provide students with an opportunity to practice having conversations in a second language. This can help students to develop their speaking and listening skills, as well as their ability to understand and use new vocabulary and grammar. Vocabulary development: Chatbots can be used to help students expand their vocabulary in a second language. For example, students can engage in conversation with the chatbot and use new words and phrases in their responses. The chatbot can then provide feedback and corrections, helping students to learn and retain new vocabulary.

Grammar practice: Chatbots can also be used to provide students with opportunities to practice using grammar in a second language. For example, the chatbot can present students with sentences that contain errors and ask them to identify and correct the mistakes. This can help students to improve their understanding of grammar and become more confident in their use of the language.

Overall, chatbots like ChatGPT can be a useful tool in higher education language learning programs, providing students with opportunities to practice and improve their speaking, listening, vocabulary, and grammar skills.

These are interesting suggestions, and all are possible. There is a potential for a chatbot with real language capabilities to be a conversation partner for a second language learner with the advantage of always being available, never getting tired, generally being accurate, and providing by and large appropriate and personalised feedback to the learner.

### **ChatGPT and Plagiarism**

Finally, I 'asked' ChatGPT about plagiarism. Would using ChatGPT to write an assignment constitute plagiarism?

### Figure 8

#### ChatGPT's response when asked whether using it would constitute plagiarism

It is not clear whether using chatbots like ChatGPT to write assignments would constitute plagiarism. Plagiarism is generally defined as the act of using someone else's work or ideas without giving proper credit. In the context of academic assignments, this typically refers to using someone else's words or ideas without citing the source.

If a student uses ChatGPT to generate text for an assignment, and the resulting text is original and not copied from another source, then it is unlikely that this would be considered plagiarism. However, it is important for students to understand the limitations of chatbots and the potential for bias and error in the text that they generate. Students should also be aware of their institution's policies on the use of AI-powered tools in academic work and ensure that they follow these guidelines.

In general, it is always best for students to use their own words and ideas when writing assignments, and to carefully cite any sources they use. This will help to ensure that their work is original and meets academic standards for integrity and attribution.

This is an interesting and guarded response from ChatGPT. As Weller (2022) points out, the use of tools such as ChatGPT raises ethical dilemmas for both students and faculty.

### Discussion

The common reaction when demonstrating ChatGPT to colleagues is to be dumbfounded. The speed of the responses, and the quality of the language is surprisingly good. This has led to a discussion about the integrity of assessments done by students in our centres.

Initial reaction from colleagues might be to return to pen and paper in-class invigilated writing assessments. This can ensure that the writing produced by the student is a true reflection of the language ability of the student. However, it could be argued that ChatGPT is an extension of

tools which language centre teachers already recommend, such as Microsoft Editor, Grammarly and in-house tools such as the Common Error Detector. There is also the increasing use of Google Translate and other translation tools by students. Should students be prevented from using these tools? If yes, are all tools to be 'forbidden' or only some? Would the use of Google Translate be acceptable for reading or isolated vocabulary, but not for paragraph level translation? If tools are forbidden, how is the policy enforced in out-of-class assessments?

At my language centre, the following strategies were suggested as being possible as short to medium term measures:

- Get students to annotate their script or write a short reflection. In the annotations / reflections, students need to explain why they have used certain language features in the text.
- Students could be required to write a list of 'tools' that they have used to write the script (e.g., Microsoft Editor, Grammarly, Common Error Detector) at the end of their piece of work
- Speaking assessments can still be a recorded video, but also have a live Q&A where the student has to demonstrate his/her ability to give spontaneous responses (i.e., the questions should not be rehearsed)
- Students can also be asked to explain the process of creating their script / video etc. in the Q&A

Longer term, assessments need to be redesigned. This could include:

- personalising the task, so that students talk more about their own experiences
- integrating multimedia into the task so that students are not only writing a text-based essay or presentation script.
- incorporating some of the ideas above into the assessment design

In cases where the class teacher suspects that the student has used 'help' and that the submitted script is not a true reflection of the student's language ability, the following is suggested:

- Teacher with a colleague should require the student to come in for a 'talk' about their assessment. Teacher (with colleague) asks the student how the student wrote the script.
- Depending on the student responses, the student can be downgraded for their submission.

## **Future possibilities**

ChatGPT has only been available for a few months but it already has the potential to radically change the way courses, including foreign languages are taught and tested in high schools and tertiary institutions. In an ideal scenario, a future incarnation of ChatGPT would be designed as the perfect learning partner. It would be able to provide individualised tuition to the learner, building on their existing knowledge, providing positive feedback where appropriate and correcting where necessary. Existing knowledge of language learning could be built into this application, so that the ideal combination of controlled and freer practice, recycling and creativity, could all be part of the personalised learning plan.

In this scenario, the question about the role of the language teacher and the language centre still exists. Why employ a human to teach a learner if a machine can perform a better job?

A less favourable view of the future would see a ChatGPT application fully capable of assisting learners, but providing too much help at an early stage. This would lead the learner to misuse the technology so that little or no learning takes place, and the tool is only used to provide answers to assignment questions. This scenario also leads to questions about the role of the language teacher and centre. If it is unclear what work the learner submits is their own, then the teacher might be restricted to setting short in class conversation and writing practice as out-of-class work would always be suspected. Assessments would need to be re-designed to short impromptu talks and writing tasks in closed environments without access to certain technologies, for example by using lockdown browsers. However, this would bring into question whether the language being practiced in the classroom reflects the real-world scenario where different technologies are widely available.

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A possible short-term advantage for the human is that ChatGPT is text based, and language is much more than text. Conversational text by itself is often misinterpreted as it loses the facial expressions of the speaker, and the use of intonation, word stress and other phonological aspects. However, this is changing fast. Tools such as <u>Replika</u> (2015) already provide voice and chat capabilities. Although these can only understand 'normal' speech, it is likely that with time their abilities will increase.

#### A way forward?

The capabilities of ChatGPT have been widely reported, including scoring over 50 per cent in the US medical licensing exam (Purtill, 2023) while an alternate AI tool from Anthropic was able to pass a US university's law and economics paper (Tabarrok, 2023). Terwiesch (2023) demonstrate how ChatGPT was able to pass the final exam of a typical MBA core course, Operations Management. Terwiesch (2023) offers some advice from the implications of ChatGPT, some of which I have adapted for tertiary English courses at university.

#### Be Mindful of What ChatGPT3 Can and Cannot Do

ChatGPT3 can write in accurate English in a variety of styles. What it finds difficult is to use specific up-to-date citations, and then synthesize and integrate them together with the writer's opinions. Academic essay questions could be adapted to follow this structure, although this is the higher order skill which is generally not expected of year 1 undergraduates.

# **Continue to Teach the Foundations**

The idea behind this is that it is still important for learners to have basic maths skills, even if the more advanced skills are now done by calculator. In the same way, a basic knowledge of a language can give the user a good idea if, for instance, Google Translate is providing a reasonable translation. However, for a language course at university it can be difficult to know what 'foundations' actually mean. Should students arrive in university already with a firm grasp of the foundations of the language that their course will be taught in? If yes, what should be the purpose of university level English courses for students if AI applications can produce texts at a similar level?

#### Let Students use Chat GPT3, but Simultaneously Raise the Bar for Assignments

This is an interesting idea. If ChatGPT is able to produce a satisfactory essay (e.g., graded at C+), the student could be expected to improve this essay so that it could achieve an A grade. This raises the question of what grade the student should get if the original essay is not improved. Should the student still get a C+ f they have not done any extra work? Should grading be replaced by Pass / Fail, with the student failing if there is no improvement shown in the essay. Alternatively, the student could be asked to explain what is effective about the AI generated work, and how it could be further improved. A possible issue with this is that the AI tool might also be able to provide an answer to this further problem.

#### Don't be Shy using Chat GPT3 to Improve the Productivity of the Teaching Process

This is another interesting idea - use ChatGPT to produce essay questions, assignments and other teaching materials. One risk that I can envisage is that an 'arms race' ensues with faculty using ChatGPT to set the questions and students using similar tools to answer them. The winner would be the ones with the best AI tools.

The capabilities of AI have moved fast. As someone who has been stuck in frustrating conversations with chatbots run by banks and airlines and has experimented with small scale chatbots in a number of the language centre's courses, I believed I was aware of the limitations of current chatbots, and that while there was potential for more natural language capabilities, this was still many years away. ChatGPT has changed my view. The future has arrived suddenly. Language Centres, and the wider academic community, need to change to keep up with the future.

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