學術對談

內容分析的變遷面貌：
對社會建構現實及其他的思考

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克勞斯·克里彭多夫教授
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「我發現大多數傳播學者運用的研究方法，都借自其他學術領域：
實驗法源於心理學，調查法來自民意研究，經濟學則為我們提供了
模擬法……諸如此類，不勝枚舉。這讓我更加辨明，內容分析和
傳播網絡分析是僅有的兩項原生於傳播學領域的研究方法。對於
這兩種方法，任選其一、埋首耕耘，都不僅有助於提升傳播研究的
素質，亦可加強當時仍在困境中掙扎的傳播學領域。」

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Dialogue

The Changing Landscape of Content Analysis: Reflections on Social Construction of Reality and Beyond

Discussants: Klaus KRIPPENDORFF, Clement Y. K. SO
Editor: Clement Y. K. SO
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Abstract

Prof. Klaus Krippendorff is Gregory Bateson Emeritus Professor of Communication at the Annenberg School for Communication, University of Pennsylvania. He received his PhD in communications from the University of Illinois (Urbana) in 1967. He has received numerous awards and honours over the years. To name just a few, he received a Doctor of Philosophy *honoris causa* from the Linneaus University in Kalmar/Växjö, Sweden in 2012. He is an elected Fellow of the International Communication Association (ICA) and was its president in 1984–85. He is an elected Fellow of the American Association for the Advancement of Science (AAAS) in 1982. His book *Content Analysis: An Introduction to Its Methodology* received the ICA Fellows Book Award in 2004. He has published extensively in many fields including communication, research methodology, semantics, information theory, design, cybernetics, etc. In this academic dialogue, he talks about how he first came to the U. S. from Germany and his early encounter with the method of content analysis. He elaborates on his unique approach to the methodology of content analysis, its changes in practice over the years, as well as his insights on communication scholarship. His organic involvement in and cross-pollination of many related fields listed above is also revealed.

Clement Y. K. SO (Professor). School of Journalism and Communication, The Chinese University of Hong Kong. Research interests: Hong Kong press, sociology of news, citation analysis, content analysis, development of the field of communication.

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克勞斯‧克里彭多夫教授簡介

　　克勞斯‧克里彭多夫教授（Prof. Klaus Krippendorff）是賓夕法尼亞大學安那伯格傳播學院的 Gregory Bateson 榮休教授。他在 1967 年從伊利諾伊大學（University of Illinois, Urbana）獲得傳播學博士學位，在過去 50 年學術生涯中獲得獎項及榮譽無數：例如，他在 2012 年獲得瑞典 Linneaus University in Kalmar/Växjö 頒發的榮譽博士學位；當選為國際傳播學會（ICA）院士，並於 1984–1985 年擔任該會會長；並在 1982 年獲選為 American Association for the Advancement of Science (AAAS) 院士等。他的 *Content Analysis: An Introduction to Its Methodology* 一書於 2004 年獲 ICA 院士圖書獎，被譯為不同文字的版本出版；另一本著作 *The Semantic Turn: A New Foundation for Design* 則同樣被譯為各種外文版本廣泛傳閱。其研究著作橫跨不同領域，內容涉及傳播學、研究方法、語義學、資訊理論、設計學、控制論等，研究焦點則包括社會建構現實中的語言和對話角色、解放知識論和科技設計、內容分析和語義學、對話理論和資訊理論、控制論等。

KK：克勞斯‧克里彭多夫
CS ：蘇鑰機

CS：您在德國出生，為何後來去了美國？

KK：這有很多原因。首先，在 1920 年代，我的父母曾在美國待過幾年。父親因參加一個德國和美國合作的學術項目而去了美國，母親則出於好奇，去了新大陸。他們在尼亞加拉瀑布訂婚。我是聽著他們的旅行故事長大的，所以在我還搞不清楚那些旅遊勝地的具體方位時，就已經知道它們的風情地貌。

　　驅動我來美國的主要因素，則是在 1954 到 1961 年間，我在一所前衛的德國大學（the Hochschule fur Gestaltung in Ulm，於 1968 年關閉）學設計。在那裡我接觸到許多新奇的理念，諸如信息論、系統論、控制論、傳播理論、博弈論、計劃及運籌研究等等，而這些理念都誕生於美國。社會認知研究也讓我著迷，引導我去思

考究竟我們是看到世界真正的本貌，還是看到我們自己建構的歷史。其後我申請到了富布賴特（Fulbright）獎學金，去了普林斯頓大學。

CS：但您是在伊利諾伊大學修讀傳播學的，這是怎麼回事呢？

KK：普林斯頓大學是承辦我獲得獎學金的機構所作出的選擇，而我想了解的理念卻跟他們的想法格格不入。當時普林斯頓大學的心理學系專門研究老鼠心理學。《普林斯頓人報》（*Daily Princetonian*）曾刊登一篇關於我的報道，並配了我站在老鼠籠前的照片，我就知道必須要逃離該地。1961年的聖誕假期，帶著一位同情我的學者寫的推薦信，我驅車前往哈佛大學、麻省理工學院、密歇根大學、密歇根州立大學和伊利諾伊大學厄巴納校區，去拜訪那些知名的教授。其中，伊利諾伊大學傳播研究所的開放性和跨學科特質最吸引我。

CS：在伊利諾伊大學，您修讀了哪些科目？它們如何影響到您後來的學術道路？

KK：除了大眾傳播、人際傳播、技術傳播等常規科目外，我還選修了文化人類學、語言學、社會學、社會心理學和研究方法的課程。但對我影響最大的是阿什比（Ross Ashby）所教授的為期一年的控制論。很多傳播概念在當年甚至現在都是偏向線性的，著眼於由信息生產，到傳遞，再到產生效果。控制論使我認識到，反饋令傳播在很大程度上成為一種循環現象，會對相關人士產生穩定或不同形態發展的後果。它的系統概念鼓勵我拓展更廣闊的視角，加上我的設計學訓練，促使我強烈地批判傳播學的一些理念──因為它們強化了現狀，並將研究者束縛在既定框架中。

舉例來說，我發表的第一份作品是一篇獲獎的論文，當中批評了拉斯韋爾（Harold Lasswell, 1948, p. 117）當時被廣泛接受的對傳播研究領域的定義：「誰」（who）、「說」（says）了「什麼」（what）、通過什麼「渠道」（channel）、給「誰」（whom）以及帶來何種「效果」（effect）。我認為這個想法不僅把傳播學限制為一個線性概念，只會給那些對操縱感興趣或害怕被操縱的人有參考價值，而且還把整個領域分割了：將「誰」作為傳播者的研究，「什麼」是傳播內容

的分析，「渠道」是傳播路徑，(給)「誰」是受眾研究，而「效果」是接收和影響研究。我認為這種劃分使我們無法理解傳播在社會中的作用，只會令我們的學問有利於那些操縱社會的既得利益者。

CS：您的博士論文是關於內容分析方法的研究，寫成於 1960 年代。它也是最早一批關乎內容分析的系統化研究。您是如何對這種方法產生興趣的？

KK：當時我作為研究助理，參與了幾個項目，涉及訪談編碼（coding）和大眾媒體的內容分析。我廣泛閱讀了相關的研究論文，對內容分析的學術素質感到失望。首當其衝便是貝勒森和拉紮斯菲爾德（Berelson & Lazarsfeld, 1948）的研究。我發現大多數傳播學者運用的研究方法，都借自其他學術領域：實驗法源於心理學，調查法來自民意研究，經濟學則為我們提供了模擬法⋯⋯諸如此類，不勝枚舉。這讓我更加辨明，內容分析和傳播網絡分析是僅有的兩項原生於傳播學領域的研究方法。對於這兩種方法，任選其一、埋首耕耘，都不僅有助於提升傳播研究的素質，亦可加強當時仍在困境中掙扎的傳播學領域。我之所以選擇內容分析，部分原因是我修讀過語言學和文化人類學科目，這賦予我一些其他傳播研究者沒有的視角。英語是我的第二語言，或許也促使我作出這樣的決定——學習另一種語言總能給你多開一扇窗。

　　回想起來，還有另一個可能更深層次的原因。我曾是一名設計師。設計師制定行動計劃，期望可以改善一些事情。當時我本可以針對當時的問題做一個實證研究，但我更感興趣的是去做一些對傳播學術有貢獻的事。因此我的博士論文對內容分析方法提出了改進。

　　在我確定了論文的方向後，對信息控制論的認識幫了我很多。大多數學者不太了解的是，研究是基於學術興趣去觀察非結構化的現象，從而處理相關的信息。以內容分析作閱讀文本為例，是用現存的分析技術來處理經編碼的數據（coded data），從一個抽象級別到另一個級別，直到研究者能夠回答他自己提出的問題。我所理解的內容分析就是這樣一個過程，所以說我的博士論文是探討方法論的。

CS：學者們從不同的角度看內容分析，發展出不同的方向。您對內容分析方法的取向和其他學者的有何不同？

KK：重新審視內容分析者實踐的概念，令我明白到閱讀、使用和生產文本 (text) 在日常生活中的意義，也意識到內容分析者使用的視角，可以不同於那些生活在文本中的人所用的視角。和文化人類學及民族誌的接觸，讓我質疑那些認為文本只是「容納」(contain) 一種意義的內容分析者。當我們在談及傳播，並著眼「內容」作為這種方法的名字時，我發覺這些想法是源於使用了常用但有誤導性的內容隱喻 (content metaphor)。將文本設想為把作者的意思傳遞給讀者的容器，導致一種簡單化及在認識論上有問題的取向。它剝奪了讀者自己對文本作解讀的能力。有些人說我的《內容分析》書中的第二章最難懂，這章揭穿了內容隱喻的使用，並且建立了這樣的認知：意義是在閱讀文本過程中出現的。

CS：是的，我還記得在1980年代上您的內容分析課時，也覺得這一章不容易明白，但在概念上就很有啟發性。

KK：對，這就是了。那您可能還記得我的論據：內容分析者不能忽略自己的讀者角色，更不能否認讀者理解文字訊息的創造能力。畢竟所有社會科學家都是語言社群的成員，很多時候是這個社群給予他們識讀能力，但其能力不一定優於別人。這使我的內容分析取向，有了一個文化上可辯解及「以人為本」的認識論基礎。

　　當然，有學者堅持意義的客觀性，並把內容作為一個實體，而我就更願意著眼於可重複性和有效性 (validatability)。有傳播學者堅持區分質化內容分析和量化內容分析。在我看來，所有內容分析開始時都是質化的。當分析文本數量超過一個學者的處理能力時，量化才變得重要。在這時，研究項目需要建立某種正式的合作方法，及採取素質控制的標準。此階段就需要一個大家都認同的方法。計算 (computational) 內容分析者是極端量化的例子。電腦輔助工具通常將文本的複雜性變為簡單的計算方式，他們希望可以繞過人的語文識讀能力，好像文字聯繫、情感和詞雲 (word cloud) 就是所有需要關注的東西。除統計分析外，他們還遺漏了很多可以推論到的其他訊息和意義。

　　分析構想 (analytical constructs) 組成的概念就回應了這個簡單的道理。它將研究者和他們感興趣的抽樣文本聯繫起來。通過這

個聯繫的實證概括（empirical generalization），或可引伸出分析構想概念。這些概念支持了內容分析者從文本內容推論到在文本中相關人士所感受到的意義。對我來説，內容分析不應僅是滿足分析者原先的想法，而是要經由被分析文本在社會現實中扮演的角色來鑑定。

我把內容分析當作一個相當靈活的工具箱，可以因應分析文本所處的脈絡做出具體的推論。這些推論的範圍，可以從個別作者如何建構自己的現實，到揭示人們或未有意識到的大型文化事件。

至於您所提到的內容分析的其它方法，我不妨在此列舉一些，雖然它們的提出者可能不太願意被稱為內容分析者，但大家的關注點卻非常相近：話語分析（我正在編輯一本相關主題的書）、會話分析、修辭學、社會建構分析（我在這方面也做了很多工作）、民族誌，還有基於文件檔案的歷史研究。內容分析者其實可以向它們借鑒。

CS：內容分析是傳播學研究的一種重要方法，多年來發展迅速。在過去數十年，進行內容分析有何主要變化？

KK：最早期的內容分析主要是個別學者來進行。二次大戰期間，政府機構研究敵方的宣傳。廣播和報紙的內容增加了很多，需要大量的分析員來處理具體問題，研究機構也要收集文本並回答對局勢有影響的問題。我開始研究時，內容分析是由學者隊伍和編碼員進行的，主要涉及新聞報道、電視節目、訪談、書籍和法律文本。從那時起，人們就開發了很多電腦輔助設施，各地湧現出提供分析文本的數據庫。在研究項目中可被分析的文本單元數量，增長速度之快，令人難以想像。1970年代，互聯網開始出現。搜尋引擎為內容分析者提供了大量文件檔案，但也令處理文檔的需求大增。

CS：自 1980 年代以來，您的著作《內容分析：方法學入門》（*Content Analysis: An Introduction to Its Methodology*）已出了四版。您能告訴我們，在更新這本書時有何具體想法？

KK：我教內容分析的課，並被邀請指導各種學術、法律、商業和有關計算的內容分析項目。雖然內容分析的歷史仍在不斷進化，但我

很高興自己在第一版時開發的方法學框架經得起各種考驗。然而，在參與過程中我知道了什麼需要更好的解釋，也認識到內容分析者在日益依賴中介文本（mediated text）的變動世界，會面臨很多挑戰。

以前一些《內容分析》的讀者接觸不到實際例子。因此，我和博克（Mary Angela Bock）編輯了《內容分析讀本》（*The Content Analysis Reader*, 2009），該書收錄了一些優秀案例，看內容分析者如何解決經常出現的問題。我將此書作為《內容分析》的補充，推薦給對內容分析具體方法感興趣的人。

後來的一些版本在兩個方面有顯著的改變。第一方面是對分析技術和電腦輔助的討論，這方面取得了頗多的進步。在1960年代，互聯網尚未出現。到了1980年代，主要根據編碼員的實踐而發展出一些計算技術。再到2000年代，我們使用文本挖掘法（text mining），目前經過演算（algorithm）程序發展為Webcrawlers。分析引文網絡已有悠久的歷史，但Webcrawlers可根據幾個特定的種子，進而在某些文本範圍內找到互相連繫的文本。通過URLs連接的網頁、主題標籤（hastags）串聯的Twitter和Facebook訊息，網絡文本（networked texts）的概念應運而生，將文本聯繫到一個共同來源，互相回應及有更多可能性。網絡文本可為選舉、社會運動和日益增長的公眾關懷提供新的視角。

第四版談及的另一個發展是機器學習（machine learning）。在第一版時已有研究提到此概念，現在它獲得正式名稱，意指通過演算法讓機器取代人工進行的文本編碼。但機器替代人工識別文本特徵的好處常被誇大。開發者稱他們的軟件能夠「從文本中抽取內容」、「挖掘概念」和「獲取信息」，這些說法在認識論上是值得質疑的，依靠它們之前要先對其進行批判的檢視。

最近眾編碼（crowdcoding）成為內容分析一種分散的形式。人工智能研究者發現，某些涉及文本解讀的判斷，很難通過程式（program）來處理，但將這些工作分派給渴望賺些小錢的互聯網用戶，就容易進行得多。這個過程在利用電腦有效處理大量數據時，實質上把考量意義的工序外判了。眾編碼仍有很多發展可能

性,《內容分析》的第四版對如何改善它提出了一些建議,但眾編碼確實代表了一個新方向。

　　另一方面的改變,是第四版大量增加了有關信度的內容。新版通過使用更強的系數,提升了對單位化文本(unitizing texts)的信度測量。它能更好地評估文本挖掘能力,並為建立多值(multi-valued)文本編碼的信度勾劃了一個方向。這些都是質化研究者共同關心的問題,但之前因為缺少合適的計算技術而被忽視了。信度測量指標為編碼數據的素質提供了保證,但它不應成為學術研究的瓶頸。

CS：《內容分析》一書被翻譯為多少國家的文字？讀者有何主要的反應？來自不同國家的反應有何異同？

KK：從 1980 年的第一版起,《內容分析》被翻譯成七種文字,包括義大利文、波斯文、日文、西班牙文、印尼文、匈牙利文和中文。

　　我不懂這些語言,因此無法判斷這些譯本的素質,但我對第三版的繁體中文譯本很有信心。它的譯者曾是我的學生,他後來進一步修習文學和法律,至今已經出版了七本自己的書。除了他本身的資歷外,他在翻譯過程中詢問了我很多問題,令我知道他處事很認真。第四版也將會翻譯成簡體中文。

　　至於您所問及的來自不同國家的反應──這些不同的翻譯版本都有很好的反饋,而英文版跨越了頗多語言界限。當我參加國際學術會議時,我驚喜地發現這本書被很多人知曉、引用、欣賞和運用。不同語言區域存在截然不同的語法、隱喻和文本使用方式,我經常詢問讀者是否遇到文化差異導致的閱讀困難,但沒有發現什麼特別的問題。我相信這本書發展出來的方法,能令具有創造力的傳播學者有足夠的空間,來進行他們的學術工作。

CS：您對信息論、控制論、設計學、語義學、詮釋學等領域都有研究。對一個學者來說,您認為擁有多學科的研究興趣有多重要？在您看來,學者應集中於某個學術範圍,還是要有較廣闊的關注？

KK：對您這個問題的簡短回答是：對的。這也是我為什麼到美國當研究生,最後去到伊利諾伊大學。論文選題很重要。一個博士畢業生要比任何其他人都更了解自己的論文題目。一個足夠廣博且使眾人受益的題目,可以產生影響並鼓勵其他學者繼續對它作出貢

獻。我建議所有研究生要選擇一個有未來的論文題目。然而，我認為這些題目不會來自一個狹窄的學科窠臼。我的靈感來自於其他學科中我熟悉的概念框架，我的研究反過來又能為這些學科添磚加瓦。我很幸運當時能夠身處一個跨學科的博士課程，並受到鼓勵去建立新的學科聯繫。沒有了這些新思維的刺激，對我個人而言，我無法想像自己的學術研究，及到其他領域做研究的可能性。之後，我和有不同視角但目標相同的人合作，開發了很多可能性，如果是個人單打獨鬥的話就根本不可能。無論如何，每個人要按自己的計劃進行研究，並努力走在其他人的前面。

CS：就您的研究興趣，可否解釋傳播學、信息學、社會構建現實（social construction of reality）、控制論、設計學、批判性學術等範疇，是如何相互聯繫？為什麼您會選擇將這些領域結合？

KK：這個問題的答案足以寫一本書了，讓我對此簡要地做一個回答。我的設計背景給了我勇氣，去看事實描述以外的東西。我將現實（reality）視作人類干預（human interventions）行為的歷史後果，而且它邀請我們去探索之前未曾想過的可能性。我學習傳播並非因為對媒體感興趣，而是我認為傳播可令人們合作去干預現存的事物。控制論給予我的概念工具，讓我看懂複雜的傳播網絡和它們帶來的動態變化。我對語言的關注不僅是源於學習了語言學，還因為我意識到語言的使用是能帶來變革的。我曾為設計師寫了一本題為《語義學的轉向：設計的一個新基礎》(2006) 的教科書，意在將傳播的理念引入設計專業。這本書是成功的，因為如今有很多設計師在決定他們設計的含義時，會重視語言的使用，並專注於人際介面，和人們如何談論設計和其意義。

我也將設計理念引進傳播研究，因為我意識到語言不僅描述世界，它同時構成了世界。這引發我關注社會構建現實的議題。壓迫、解放和創新都是通過語言來引領的。我的另一本書《有關傳播：他者、意義和信息》(2009) 收錄了幾篇文章，它們為我走向研究社會建構奠定了基礎。我近期組織了一個主題為「對話的行動」的會議，將一些志同道合的學者聚在一起。我們不認同一種想法：溝通時使用的語言並無實質後果。如果每天的生活、政治和學

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術洞見都是由語言建構的話,我們不該假裝學術研究成果只是報告
我們的想法。在我看來,我們不單要將事情理論化及要對學術研究
的結果負責,我們也要意識到自己在創造世界,並有責任將它變得
更好。回到關心文本的內容分析上,它不應該只關注說了或寫了的
內容,還要探討傳播、再生產和文本使用究竟實際做了什麼。

**CS：作為一個質化研究者,並對對話分析、權力建構的知識論批評、代表
性與社會建構等領域有廣泛興趣,您為什麼會提出 Krippendorff's α
系數?**

KK：您不是第一個問我這個問題的人。在我成為安那伯格傳播學院的
助理教授不久,我們受邀進行一項關於電視暴力的大型內容分析
研究。當時大眾傳媒因為在電視上展示暴力內容而頗受歡迎,美
國的公共衛生總監 (The Surgeon General of the U.S.) 要回應公眾的
憂慮,委託我們做這項研究,美國國會也計劃針對此問題召開聽
證會。進行電視劇的內容分析面臨困難,因為暴力從何處開始沒
有清晰的定義。很多電視劇集中都存在暴力事件,其互動的本質
令人難以區分,究竟誰是侵害者、誰是受害者。我們的編碼員因
此陷入困境,我們清楚地知道,如果所得結果不夠扎實,就不會
被別人認同。儘管 Scott 的 π (pi) 系數 (1955) 和 Cohen 的 κ (kappa)
系數 (1960) 在我們遇到信度問題前已經存在,但我們當時並不知
曉。這可算是因禍得福。因應我們的數據,我提出了 α (alpha) 系
數,之後它也適用於很多其他內容分析研究。不依賴當時存在的
信度測量方法,我們避過了它們的認識論問題。我們的研究結論
經受得起媒體和傳播學者的嚴格審查。隨後我將 α 系數發展成一
系列的信度系數,以便應用在當時其他測量方法無法應對的情況。

**CS：在內容分析中,信度是一個很重要的問題,而信度測量經常被誤解甚
至被一些研究者誤用。您認為主要的問題在哪裡?**

KK：於我而言,信度是指可以依靠經編碼的數據,明確地代表研究者想了
解的現象,並提供信息來支持研究的結論。如果編碼數據能被證明
是可靠的,分析者就有充分理由繼續進行研究。數據是一種中介,
把通常沒有結構的現象與研究者想就現象提出的理念聯繫起來,我對
信度的想法也是由此而生。

　　有些內容分析者通過同意度百分比來測量信度，這種做法可能有誤導性。因為百分比受條目數量影響，無法說明數據能否清晰表達研究的現象，而且只適用於兩個編碼員的情況。

　　可靠的數據需要為研究者的結論提供充分的信息。在兩種極端情形下，數據無法提供所需信息。一種情況是編碼是隨機的，另一種是沒有變化。第一種情況就好比是電視畫面上只顯示雪花點。第二種情況則是整個螢幕上只有一種顏色。前者就是所謂的矯正機率的同意指數（chance-corrected agreement coefficient）為零的情況。後者則是當測量工具失靈或編碼者沒有看到應有的分別，因而出現百分百一致，沒有顯示任何差異。對一些研究者來說，這似乎令人費解（Cicchetti & Feinstein, 1990; Feinstein & Cicchetti, 1990）。我無法在這裡重述我頗長的論據（Krippendorff, 2012），只能說這些研究者混淆了評估信度的基本目的，而他們傾向使用看來不錯的測量方法，但這些方法可能導致他們分析了有缺陷的數據。

　　一個理解錯誤的例子是Zhao、Liu及Deng（2012），他們想將信度等同於編碼員在處理書面編碼說明時遇到的困難。編碼員面對的困難，令編碼設計者要重新思考，同時涉及編碼員的能力或心理，但這和數據是否有信度沒有關係。另一個誤導性的例子是Cohen（1960）提出廣為人知的Kappa系數。它將κ值為零的情況定義為兩個編碼員之間沒有相關性，而不是代表現象的數據之間是否有關聯。這一構想導致的奇怪後果是，編碼員對編碼的使用達成一致意見，反而招致懲罰，令統計結果不符合真實情況。

　　Alpha系數避免了以上四種錯誤的想法。它可以讓不同數目的編碼員來進行數據的信度測試，可應用於有序的數據，並能處理多值的編碼，同時允許編碼員在連續的文本中自己定義分析單位。

CS：謝謝您分享了有關內容分析這些年來的發展，以及它如何聯繫到您採用的多學科研究取向。我希望這個對談，能讓中國讀者更深刻地認識到您所談及的各種認識論和方法論議題，而且大家很快就可讀到《內容分析》最新版的中文譯本。

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Academic Dialogue with **Klaus Krippendorff**

The Changing Landscape of Content Analysis: Reflections on Social Construction of Reality and Beyond

KK: Klaus KRIPPENDORFF

CS: Clement Y. K. SO

CS: **You were born in Germany. What brought you to the United States?**

KK: There are many reasons. To start, in the 1920s, my parents spent several years in the U.S., my father through a German-American Academic program, and my mother curious to see the world. They got engaged at the Niagara Falls. I grew up with the stories of their adventures. I knew the most important tourist sights before I had a clue of where they were.

The most important impetus to come to the U.S. came from studying design between 1954 and 1961 at an avant-garde university (the Hochschule für Gestaltung in Ulm, Germany, closed in 1968). It exposed me to then amazing new ideas: information theory, systems theory, cybernetics, communication theory, game theory, planning, and operations research, all were born in the U.S. I was fascinated also by research in social perception which taught me to question whether we could see the way the world really is or whether we see our history of being in it. A Fulbright Travel Grant brought me to Princeton University.

CS: **But you studied communication at the University of Illinois. How did this happen?**

KK: Princeton University was the choice made by the agency that handled my fellowship. The ideas I wanted to pursue probably made me an administrative oddball. Meanwhile, Princeton's psychology department had become focused on rat psychology. After the *Daily Princetonian* published an article about me, picturing me in front of rat cages, I knew I had to escape. During the 1961 Christmas break, with

recommendations from a sympathetic scholar, I drove to see prominent professors at Harvard, MIT, the University of Michigan, Michigan State University, and the University of Illinois in Urbana. The openness and interdisciplinarity of the Institute for Communication Research at the University of Illinois attracted me most.

CS: **And what subjects did you study and how did they influence your later academic career?**

KK: Besides standard topics of communication research—mass-, interpersonal-, and technological—I took courses in cultural anthropology, linguistics, sociology, social psychology, and research methods. But what influenced me most was a one-year course in cybernetics, taught by Ross Ashby. Most communication conceptions at that time and still today are largely linear, proceeding from producing messages to their dissemination and having effects. Cybernetics nudged me to recognize that feedback made communication a largely circular phenomenon with stabilizing or morphogenetic consequences for those involved. Its systems conceptions encouraged me to develop larger perspectives and the designer in me turned critically against communication conceptions that promoted the status quo and boxed researchers into established frameworks.

For example, my first publication was an award winning paper critical of Harold Lasswell's (1948, p. 117) then widely accepted definition of the field of communication research as answering five questions: "who" says "what" in which "channel" to "whom" with what "effect." I thought this conception confined communication scholarship not only to a linear conception, one that provided insights only to those interested in manipulations or afraid of it, but also compartmentalized the field. He wanted "who" to be the study of communicators, "what" to be content analysis, "channel" to look at communication media, "whom" to be audience research, and "effect" to be reception and influence research. This compartmentalization, I argued, prevents us from understanding what communication does in society and delivers our scholarship to vested interests in manipulations.

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CS: Your dissertation research done in the 1960s was about content analysis. It was among the earliest systematic studies of this methodology. How did you become interested in this analytical method?

KK: As a research assistant I worked on several projects that involved the coding of interviews and mass media matters. I read up on what I was doing and was disappointed about the quality of scholarship in content analysis. Berelson and Lasarsfeld's (1948) were first. I realized that most of the methods that communication researchers were using were adopted from other disciplines: experiments from psychology, surveys from public opinion research, simulations from economics, etc. It became clear to me that content analysis and the analysis of communication networks were the only two methods indigenous to communication research and working on either of them would both improve the quality of communication scholarship and strengthen the then struggling field. I decided on content analysis in part because of the courses in linguistic and cultural anthropology I had taken gave me perspectives not generally taken into account by other communication researchers. The fact that English was my second language may have played a role in this decision as well. Knowing another language always gives one additional perspectives.

In retrospect, there is another perhaps deeper reason. I was a designer. Designers devise plans of action that change something to the better. I could have conducted an empirical study of contemporary problem but I was more excited about the possibility of making a contribution of value to communication scholarship. My dissertation proposed methodological improvements.

After I decided to take that route toward a Ph.D. dissertation, my familiarity with the cybernetics of information became handy as well. What most scholars do not quite recognize is that scholarly work processes information from observing unstructured phenomena of academic interest—in the case of content analysis, the reading of textual matter—processing the coded data by means of available analytical techniques, and proceeding from one level of abstraction to another, until one is able to decide among the possible answers of chosen research questions. Understanding content analysis as such a process made my dissertation a methodological one.

CS: **Scholars look at content analysis from different perspectives and adopt various approaches. How does your approach to content analysis differ from those taken by other scholars?**

KK: Going through the conceptions that content analysts practiced led me to appreciate what reading, using, and enacting text means in everyday life, but also for content analysts who employed perspectives that did not and do not have to be shared with those who lived with the analyzed text. My exposure to cultural anthropology and ethnography led me to question content analysts who assumed that texts "contained" but one meaning to be counted. I realized that such conceptions were the result of using the common but utterly misleading content metaphor when talking of communication, starting with the name of the method. Conceiving of texts as containers for shipping meanings from their originators to readers led to a simplistic and epistemologically questionable approach to understanding communication. It denied readers the ability to create their own interpretations. The second chapter of my content analysis book, which some say is the most difficult one, debunks the use of the content metaphor and builds on the recognition that meanings emerge in processes of reading texts in the context of their use.

CS: **Yes, I recall. When I took your "Content Analysis" course back in the 1980s, I also found that chapter rather difficult but conceptually illuminating.**

KK: Good for you. Then you may also recall my argument that content analysts cannot escape from being readers, and should not deny the basically creative ability to understand written communication. After all, all social scientists are members of linguistic communities, often of the very community that gave them their literacy, not superior to everybody else. This gave my approach to content analysis a culturally justifiable human-based epistemological foundation.

Surely, there are scholars who insist on the objectivity of meanings and talking of content as an entity, whereas I preferred to talk of replicability and validatability. There are communication scholars who insist on the distinction between qualitative and quantitative content analysis. In my view, all content analyses are qualitative to begin with. Quantification becomes important only when the volumes of texts to

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be analyzed exceed the abilities of a single scholar. When this happens, research projects require somewhat formalized ways of cooperating and adopting criteria for quality control. This is the point at which an agreed upon methodology becomes necessary. Computational content analysts exemplify the extremes of quantification. Computer aids often reduce the complexity of texts to simple counting schemes hoping to bypass human literary competencies—as if word associations, sentiments, word clouds are all that mattered. Statistical accounts leave largely open what can be inferred from them.

The concept of an analytical construct accounts for this simple truth. It connects the sampled texts to their social uses of interest to a researcher. Analytical constructs may be assumed or derived by empirical generalizations of that relationship. They justify the inferences that content analysts make from the texts they analyze to what they mean to those who live with them in their own terms. To me, content analyses should not merely satisfy an analyst's preconceptions but be validatable by the roles the analyzed texts do or could play in social reality.

I conceive of content analysis as a pretty flexible toolbox aimed at making specific inferences about the context of using the analyzed texts. Such inferences may range from how individual authors conceive of their reality to revealing largescale cultural contingencies that one may not be aware of otherwise.

You asked for other approaches to content analysis. Let me just name a few related analytical methods whose proponents would not want to be called content analysts but have similar concerns: discourse analysis (I am editing a book on that subject matter), conversation analysis, rhetoric, social constructivist analyses (I did much work in this area), ethnography, not to forget doing historical research based on documents. Content analysts can learn from all of them.

CS: **Content analysis is a major research method in communication studies and it has rapidly developed over the years. What are the major changes in conducting content analyses in the past few decades?**

KK: The earliest content analyses were conducted largely by single scholars. During World War II enemy propaganda was studied by governmental institutions, the volumes of radio messages and newspapers became

bigger, involved large number of analysts, who focused on specific questions and required institutionized to gather texts and answer questions of situational importance. When I started, content analyses were undertaken by teams of scholars and hired coders and concerned largely media coverage of news, television shows, interviews, books, and legal texts. Since that time numerous computer aids have been developed and data bases containing analyzable texts have grown up everywhere. The number of textual units that could be examined in a project grew unimaginably. The Internet began to become available in the 1970s. Search engines provided content analysts access to amazing numbers of documents but also changed the demands for processing big volumes of searched document.

CS: **Since the 1980s, there have been four editions of your book** *Content Analysis: An Introduction to Its Methodology*. **Can you tell us what went through your mind when you updated the book?**

KK: I have taught content analysis and been invited to consult on various academic, legal, commercial, and computational content analysis projects. While the history of content analysis is continuing to evolve, I am pleased to say that the methodological framework I developed in the first edition withstood all tests. However, in the course of my involvements I learned what required better explanations and the challenges that content analysts face in a changing world of increasing dependence on mediated texts.

Some readers of *Content Analysis* were missing practical examples. So, Mary Angela Bock and I edited *The Content Analysis Reader* (2009), which features outstanding examples of how content analysts solved recurrent analytical problems. I am using it as a complement to my *Content Analysis* and recommend it to anyone interested in the particulars of the method.

There are two areas in which the editions have changed noticeably. One is the discussion of analytical techniques and computer aids. This area of content analysis has witnessed considerable advances. In the 1960s we did not have the Internet. In the 1980s we had several computational techniques, modeled largely on what coders did. In the 2000s we used text mining, now further algorithmized in the form of WebCrawlers. Analyzing citation networks has a long

scholarly history, but WebCrawlers work themselves through a chosen textual domain in search of connected texts from a few specified seeds. This has given rise to the concept of networked texts, based on web pages linked by URLs, Twitter and Facebook messages by Hashtags, linking texts to a common source, as responding to each other, and much more. It offers new perspectives on such phenomena as elections, social movements, and rising public concerns.

Another development discussed in the fourth edition is machine learning. The idea goes back to research already discussed in the first edition, but it has now acquired a name which refers to algorithms capable of developing mechanical surrogates for human coding of textual matter. The benefits of mechanical substitutes for identifying textual qualities are often exaggerated. Developers' claims of their software's ability to "extract content from texts," "mine concepts," and "retrieve information" are epistemologically questionable and deserve critical examinations before relying on them.

Recently crowdcoding emerged as a distributed form of content analysis. Artificial intelligence researchers realized that certain judgements, largely involving informed interpretations of texts, are difficult to program but easy to delegate to anonymous Internet users eager to earn a small financial award. It essentially outsources considerations of meanings while taking advantage computer processing of large data. Crowdcoding is not yet what it could be, and the fourth edition of *Content Analysis* makes suggestions for how it could be improved, but it certainly points to a new direction.

The other area with substantial additions in the fourth edition is reliability. It advanced reliability measures for unitizing texts by more powerful coefficients, added abilities to evaluate text mining, and outlined an approach to establish the reliability of multi-valued coding of text—common to qualitative scholars but ignored for lacking appropriate computational techniques. Reliability measures provide the needed assurances of the quality of coded data, but they should not be the bottleneck of scholarly work.

CS: **Into how many languages has *Content Analysis* been translated? What were the major feedbacks from the readers? How similar or different are the feedbacks from different countries?**

KK: Starting with the first 1980 edition, *Content Analysis* was translated into seven languages: Italian, Persian, Japanese, Spanish, Indonesian, Hungarian, and Chinese.

Because I do not speak any of these languages, I have no way to judge the quality of these translations—except for my confidence in the traditional Chinese translation of the third edition. Its translator was a former student of mine who went on to study literature and law and has so far written seven books of his own. Besides his credentials, he asked me lots of questions that assured me of his carefulness. A translation of the fourth edition into simplified Chinese is anticipated.

You asked about feedback from different countries. Besides these translations, which do surprisingly well, the English versions have crossed many linguistic boundaries. When I attend international conferences, I am amazed how widely the book is known, cited, appreciated, and used. Being cognizant of often radically different grammars, metaphors, and uses of texts in different linguistic regions, I often inquire about culture-specific difficulties readers have encountered and found no unusual kinds. I am convinced that the methodology developed in the book leaves creative communication researchers enough room to realize their scholarly missions.

CS: **You have also been involved in the areas of information theory, cybernetics, design, semantics, hermeneutics, etc. How important is it for a scholar to have multidisciplinary research interests? Do you recommend a more focused scope of academic interest or a broader scale of endeavor?**

KK: My short answer to your question is: yes. This is why I came to the U.S. for graduate study and ended up at the University of Illinois. The choice of a dissertation topic is important. As a Ph.D. graduate one ends up knowing more about one's dissertation topic than anyone else. A topic that is sufficiently rich and useful to many can make a difference and encourages other scholars to contribute to its development. I invite all graduates to select a dissertation topic with a future. However, I would also suggest that such topics cannot come from inside a small disciplinary box. I drew my inspiration from being familiar with conceptual frameworks from other disciplines to which I contributed later as well. I was fortunate to be in an interdisciplinary

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Ph.D. program and encouraged to make new connections. Personally, I cannot imagine my own scholarship without the exposure to exciting new ways of thinking and working across the aisle. Later, working on projects and with peoples of diverse perspectives but common objectives opens possibilities unimaginable alone. Nevertheless, one also has to stay on course ahead of contemporaries.

CS: **Among your research interests, can you explain how communication, information, social construction of reality, cybernetics, design, critical scholarship, etc. relate to each other? Why did you choose this combination of areas?**

KK: This question calls for writing a book. Let me just sketch how I would answer it. My design background has given me the courage to look beyond descriptions of facts. I see reality as the result of a history of human interventions and an invitation to explore previously unimagined possibilities. What brought me to study communication was not an interest in the media but because I saw communication as what enables people to collaborate in intervening what exists. Cybernetics gave me conceptual tools to see complex communication networks and the dynamics they set in motion. My focus on language was fueled not only by studying linguistics, but also because I realized that language use is transformative. I wrote a textbook for designers titled: *The Semantic Turn: A New Foundation for Design* (2006). My aim was to introduce ideas of communication into the design profession. It was successful as now many designers take the use of language in determining the meanings of their designs seriously, focusing on human interfaces, and what people say about them.

But I also brought design conceptions into communication research, recognizing that language does not merely describe the world; it constitutes the world. This led me into issues of the social construction of reality. Oppression, liberation, and innovation are all ushered by the use of language. Another book titled *On Communicating: Otherness, Meaning, and Information* (2009) collected several articles that together laid the ground on which my approach to social construction grew. I recently organized a conference on "Discourses in Action" which brought many similar minded scholars together. We were all critical of communicating as if our use of language had no real consequences.

If everyday life, politics, and scholarly insights are constructed in language, we should not pretend that scholarly results merely report our understanding. In my view, we have to go beyond theorizing facts and assume accountability for the effects of our scholarship, we have to be aware that we create the world and are obligated to change it to the better. This brings me back to content analysis as a concern for textual matter. It should not limit itself to what is said or written but address what the communication, reproduction, and use of text does.

CS: **As a qualitative scholar with broad interest in discourse analysis, epistemological criticism of power conceptions, representation and social construction, how did you get involved in developing Krippendorff's alpha?**

KK: You are not the first one who asked me this question. Soon after becoming an assistant professor at the Annenberg School for Communication, we were asked to launch a then huge content analysis of violence on television. The Surgeon General of the U.S. commissioned the study in response to public concerns, the U.S. Congress planned hearings on the issue, while the mass media thrived by showing violence on TV. A content analysis of TV drama was difficult because there is no clear definition of where violence starts. Incidences of violence are distributed over many episodes, and its interactive nature made it often difficult to distinguish between aggressors and victims. Our coders had difficulties and we were cognizant that if our findings were not solid they would be dismissed. Although Scott's π (1955) and Cohen's κ (1960) existed prior to the reliability issues we were facing, we did not know of them. This was a blessing in disguise. I developed α suitable for our data and it turned out also for very many content analyses. By not relying on the existing reliability measures, we did not adopt their epistemological problems. The conclusions of our research survived critical examination by the media and communication scholars. Subsequently, I developed α into a whole family of reliability coefficients for situations that the existing measures could not cope with.

CS: **In content analysis, reliability is a major problem and reliability tests are often misunderstood, even occasionally misused. What are the major issues?**

KK: To me, reliability is the ability to rely on something, here on coded data, to unambiguously represent the phenomena that analysts hope to study and provide the information needed to support valid conclusions. If and only if coded data can be proved to be reliable in this sense, analysts are justified to proceed. This is my concept which is derived from the use of data as mediating between often unstructured phenomena and what researchers want to say about them.

Several content analysts measure reliability by means of percent agreement. This can be misleading as percentages are influenced by the number of categories involved, cannot address whether data are informative of the phenomena of interest, and is limited to two coders.

Reliable data need to provide sufficient information to support a researcher's conclusions. There are two extreme conditions under which data fail to convey the needed information. One is when coding is random, the other when variance is absent. The analogy of the first is when a TV image shows nothing but white noise. The analogy of the second is when the whole screen displays a uniform color. The first condition is acknowledged in so-called chance-corrected agreement coefficients measuring zero. The second occurs when a measuring instrument is broken or coders do not see the needed differences at which point percent agreement is 100% lacking variation. For some researchers this seems puzzling (Cicchetti & Feinstein, 1990; Feinstein & Cicchetti, 1990). I cannot repeat my lengthy argument here (Krippendorff, 2012), only to say that these researchers confused the basic purpose of assessing reliability in favor of measures that look better but whose connection to the consequences of analyzing flawed data is in doubt.

For an example of misconceptions, Zhao, Liu and Deng (2012) want to equate reliability with the difficulty that coders experience when applying written coding instructions. Coder difficulties challenge the designers of such instructions. They reflect the competence or the idiosyncrasies of coders. However, neither has anything to do with whether data are reliable in the above mentioned sense. Another example of a misguided conception is Cohen's (1960) popular κ-coefficient. It measures agreement relative to the absence of correlations between two coders' predilections, not how the data related to the phenomena they are to represent. An odd consequence

of this conception is that it punishes coders for agreeing on their use of codes.

The α-agreement coefficient avoids all four of these misconceptions, allows any number of coders to be part of testing the reliability of data, accepts ordered data, can tackle multi-valued coding and coding tasks that allow coders to define their own units in a textual continuum.

CS: **Thank you for sharing your thoughts on the evolution of content analysis over the years, as well as how it is related to your multidisciplinary approach to communication scholarship. I hope that this interview gives the Chinese readers a deeper understanding of the various epistemological and methodological issues you explained, and will be able to read the latest Chinese version of your book soon.**

Selected Works by Klaus Krippendorff

Please refer to the end of the Chinese version of the dialogue for Klaus Krippendorff's selected works.