

香港媒體 數碼發展報告 2018

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● 第一章
前言

李文、黃煜



這是一個 最好的時代， 也是一個 最壞的時代。

——狄更斯《雙城記》

英國著名作家狄更斯在十九世紀寫出的以上句子，可以用來作為當今二十一世紀媒體業發展的最佳寫照。

首先，互聯網技術在上個世紀後期的出現，使媒體業經歷了一場前所未有的革命，而隨後出現的社交媒體，則徹底改變了媒體與公眾的關係。媒體已失去了以往對資訊傳播的壟斷，而公眾則同時可以扮演資訊接收者和傳播者的角色，並且能夠參與到資訊內容的製作過程中。

人工智能對新聞媒體業的衝擊

進入二十一世紀，以深度神經網絡為基礎，結合雲計算、大數據及移動互聯網技術而成的人工智能的迅速崛起，不僅再次改變了資訊傳播的方式，也為媒體業帶來了顛覆性的變革與重生。

作為「新聞革新的基礎」（Powers, M., 2012），人工智能與大數

據也使國際各大新聞媒體正經歷一場「量化轉型」（“A Quantitative Turn” of Journalism）（Petre, 2013），紛紛進軍大數據新聞領域。2009年3月，英國《衛報》（*The Guardian*）成立全球首家數據新聞部；2012年12月，美國《紐約時報》（*The New York Times*）推出集文字、音訊、視頻、動漫、數位元化模型（DEM），並於2014年春推出主打資料新聞的「The Upshot」欄目；同年英國廣播公司（BBC）設立「新聞實驗室」（News Lab），並於2016年實現Open Media的數據採編系統測試並投入實踐；其後英國《金融時報》（*Financial Times*）中文網開闢數據新聞專欄、中國財經新聞網成立數據視覺化實驗室。

隨着技術變革的日新月異，愈來愈多媒體使用數據可視化工具、AR（實境擴增）、VR（虛擬實境）等技術報道新聞資訊，這不但使資訊傳播的方式走向個性化、趣味化和互動體驗，也為公眾帶來了更加多姿多彩的資訊世界。

至於以演算法為基礎的個性化新聞訂製模式，則為資訊的傳播和分發帶來了重大變革。人工智能通過分析使用者的瀏覽行為數據，可以更精準把個性化和標籤化的心溫暖諮詢投送給不同的新聞受眾群體。

近年來，全球各大媒體更紛紛進行「機器人寫新聞」（Robot Reporting 或 Automated Journalism）的新嘗試。通過對大量資料的快速收集、加工與整理，再按照文字範本編製而成的新聞稿，目前已廣泛見於財經資訊及體育新聞上。例如，美聯社（AP）利用美國 Automated Insights 公司設計的人工智能機器人新聞編輯軟件 Wordsmith 撰寫上市公司的季度財報消息。在2016年里約奧運會期間，中國《今日頭條》研發的機器人通過即時撰寫新聞稿，以和電視直播幾乎同步的速度發佈報道，16天內共生產450多篇內容細緻的體育新聞稿；2017年8月8日，九寨溝突發地震，中國地震台網機器人記者僅用25秒完成從稿件撰寫到分發的新聞報道全流程，使讀者第一時間對震區情況一目了然。與

傳統記者相比，機器人寫稿的優勢還在於可以根據網絡點擊的資料活躍度，瞬間篩選出下一個熱點資訊進行新聞合成與推送。

在 2018 年 1 月英國牛津大學路透新聞學院發表的《2018 年新聞、媒體及技術趨勢和預測》報告中，接近四分之三（72%）來自全球二十九個國家和地區的近八十名媒體機構主管、主編和技術主管表示，他們計劃在未來一年裏積極試驗人工智能，以支持更好的內容推薦以及提高內容生產效率，其中包括「機器人寫新聞」。

人工智能技術帶給新聞媒體業的影響，也對新聞專業主義價值觀提出了挑戰和質疑。人工智能只會根據新聞的閱讀點擊率去判斷該新聞的熱點價值和接下來的內容選取、生產與分發，而不會像傳統新聞記者那樣，會以秉承新聞作為「社會公器」的專業主義視角，去進行社會新聞的選取與生產。

香港媒體市場現狀

香港是世界上媒體市場競爭最激烈的城市之一。雖然只有 740 萬人口，但已有 68 份報章，其中包括 37 份中文報章和 13 份英文報章、607 份期刊、三家本地免費電視台、兩家本地收費電視台、15 家非本地電視台、一家公共廣播機構，以及兩家商營電台（截止 2017 年底）。當然香港還有眾多的網絡媒體機構，但具體數字則難以估計。¹

此外，香港亦是許多國際傳媒機構亞太地區基地的所在地，其中包括法新社、彭博通訊社、道瓊斯、湯森路透、《紐約時報》、《金融時報》、《日本經濟新聞》和《華爾街日報》等，而在香港設有演播室的國際廣播機構，

1 《香港年報 2018》，第 253 頁。

則有 BBC 英國廣播公司、亞洲新聞台、CNBC、CNN 和鳳凰衛視等。²

另一方面，香港電信業的發達程度也位居全球一流水準，根據《香港年報 2018》，截至 2017 年年底，超過 92% 的香港住戶使用寬頻通訊服務。香港的流動電話普及率也高達 248%，換言之，平均每個香港人擁有近 2.5 部手機。³

與此同時，香港一些媒體機構近年來也在新媒體技術的應用上作出了一些嘗試。例如，成立於 2015 年的「端傳媒」在數據可視化新聞製作方面創作的前沿，其特別成立的媒體設計部門，透過製作互動新聞專輯、互動 infographics、數據新聞、新聞遊戲、影像故事、小測試、動畫等方式，不斷探索講故事的新方式。香港《南華早報》對香港特區政府財政預算的報道、財經新聞資料視覺化實驗室有關 2016 年中國樓市的報道，也是數據可視化新聞的成功範例。⁴

不過，近年來迅速發展的媒體新科技也對香港媒體業帶來了相當大的衝擊，多家香港媒體機構先後停業或倒閉，其中包括《新報》、亞洲電視（後又改為網絡媒體）、DBC 數碼廣播電台、《太陽報》、《爭鳴》和《忽然一週》等。包括《壹週刊》和 TVB《電視週刊》在內的多份雜誌也宣佈停止出版紙媒刊物，改為只提供網絡版的內容。

報告內容介紹

為此，香港浸會大學傳理學院的多位老師、學生及顧問一起，先後

2 《香港年報 2018》，第 253 頁。

3 《香港年報 2018》，第 261 頁。

4 黃煜：《人工智能時代資訊傳播方式的變革及對媒體生態的影響》。

花費了半年時間進行調查研究，合力撰寫了《香港媒體數碼發展報告 2018》。

本報告主要從市場受眾、內容生產、商業運營及技術平台等四個方面，探討香港媒體業在數碼化轉型上的發展，例如在媒體新科技日新月異的情況下，香港媒體用戶的媒體消費行為發生了多大的變化、香港媒體負責人如何應對媒體科技和市場受眾的變化、香港媒體從業員在內容生產過程中又出現了什麼變化、香港媒體在使用新媒體科技方面的表現如何，以及媒體業變化對香港媒體教育業帶來的影響等多方面的問題。

報告共分為七章，由浸會大學傳理學院多位師生及顧問分別撰寫的。

報告的第一章「前言」，主要是概括全球新聞業的發展趨勢和香港媒體市場現狀，並介紹報告的主要內容。

報告的第二章是「香港數碼媒體用戶調查」。在這一章中，有關作者在 2018 年 6 月至 7 月期間，以電話訪問方式對 1,000 名 18 歲或以上的香港居民進行了隨機抽樣訪問。訪問內容主要圍繞香港市民的新聞接觸與消費習慣、市民對新技術的了解及熟悉程度和市民對香港新聞媒體的信任度等三方面的問題進行研究，然後對訪問內容進行歸納和分析，並總結出一些觀察結果。

至於報告的第三章則是「香港媒體主管個人專訪」。顧名思義，這一章是根據與香港十三家媒體機構主管面對面的深度訪談內容總結而成的。參與訪談的十三家媒體機構主管，既有來自香港的報紙、雜誌、廣播、電視等傳統媒體，同時也有香港數碼原生媒體的負責人。在訪談中，受訪者內容主要圍繞三大方面的問題，包括新媒體技術對香港媒體機構造成的衝擊有多大；作為企業決策者，香港媒體主管又採取了哪些應對措施，以及香港媒體機構主管如何制定其長遠的數碼發展戰略。

報告的第四章是「香港媒體內容生產調查」。作者在 2018 年 7 月至

8 月進行了一項網絡問卷調查，調查對象為參與新聞生產各個環節的從業人員，其中包括前線記者、編輯、新聞內容設計師，以及新聞調查方向負責數據採集與可視化的程式員，共有 255 名香港新聞媒體從業員參與並完成了調查。調查範圍包括香港新聞從業員策劃新聞故事的途徑、尋找新聞故事消息和數據來源的途徑，以及新聞報道的展現方式等。

報告的第五章和第六章，分別是「香港媒體技術平台調查」和「香港媒體社交平台分析」。有關作者在這兩部分均使用了內容分析法，對香港新聞媒體機構自有的數碼平台及協力廠商數碼平台進行觀察和分析，而有關觀察共覆蓋了香港 87 家媒體，其中包括 40 家使用數碼平台的傳統媒體和 47 家原生數碼媒體。至於數據收集也主要使用兩種方法，一種是人工收集，另一種是基於媒體網站的前端代碼，利用 JavaScript 瀏覽器語言自動化內容收集操作。

本報告的第七章是「從觀望到改變：香港媒體如何應對智能科技」。在這部分裏，兩位作者闡述了全球媒體業在人工智能等科技的應用方面取得的最新發展，指出智能科技並不能完全取代記者報道新聞的角色，而且在深度報道方面更是如此。另外，作者還結合本報告的研究結果和發現，對香港媒體業在人工智能應用的前景提出了多項建議。

在調研和撰寫報告期間，我和同事們得到了香港傳媒業負責人、從業員及校內各位同事的指導、支持和協助，借此機會向大家致以衷心的謝意。

我們也希望此報告能起到拋磚引玉的作用，讓更多人關心和重視香港媒體業未來發展的問題。同時我們也期待各方專家對本報告中的不足之處批評指正。

（李文 香港浸會大學新聞與社會研究所總監，黃煜 香港浸會大學傳理學院教授）



● 第二章

香港數碼媒體用戶調查

黃磊、張引





研究方法及數據代表性

研究團隊委託香港大學民意研究計劃（HKUPOP）在 2018 年 6 月至 7 月期間以電話訪問方式，對 18 歲或以上的香港居民進行隨機抽樣訪問，樣本量為 1,000，抽樣誤差為 $\pm 3.1\%$ （以 95% 之信心水準及 2017 年底人口統計數 741 萬計算）。為增強結果的代表性，數據分析各項數字已經按照政府統計處提供之全港人口年齡及性別分佈統計數字，以及教育程度及經濟活動身份統計數字，以「反覆多重加權法」作出加權調整，從而推算全港的總體情況。

研究發現概要

- 九成香港市民每天接觸新聞資訊。
- 傳統媒體仍是新聞資訊的主要來源。
- 四成半香港市民會通過社交媒體獲取新聞資訊，Facebook 是主要平台。
- 社交媒體分享已成為香港市民最常接觸新聞資訊的渠道之一，但市民對其信任度普遍不高。
- 大部分香港市民只是被動獲取新聞資訊；超過六成沒有主動搜索習慣，超過八成不會主動分享或轉發新聞資訊。
- 年紀愈大，愈不會主動搜索新聞資訊。
- 壯年媒體用戶最喜歡分享新聞資訊。
- 九成香港市民沒有付費新聞消費習慣。
- 香港市民通過傳統媒體最常關注本地民生和國際時事，通過社交媒

本報告主要關注香港市民媒體使用以及新聞資訊接觸情況。內容主要包括三大部分：香港市民的新聞接觸與消費習慣，對新技術的了解及熟悉程度，以及對新聞媒體的信任度。報告結果來自一項關於香港新聞與數碼媒體受眾的問卷調查數據。該調查在 2018 年 6 月至 7 月期間以電話訪問方式進行。樣本以隨機抽樣方式抽取，共 1,000 名 18 歲或以上的香港居民接受訪問。

在報告中，我們更多使用「用戶」（user）一詞指代各媒體的使用者，而非採用傳統的「受眾」（audience）概念。主要原因是：「用戶」的適用範圍既包括各傳統媒體（如報紙、電視台或廣播電台）的讀者和觀（聽）眾，亦包括各新興媒體（如新聞網站、社交媒體、獨立 / 另類媒體）的新聞及資訊使用者。相對傳統媒體語境中的受眾而言，在數碼媒介環境中人們的資訊使用具有更高的自主性（autonomy）、主動性（activeness）及互動性（interactiveness）。

報告中的「社交媒體」，泛指可讓用戶自行生產內容（user-generated content），並互相交流的電子網絡媒體，包括社交網絡平台、手機應用程式、論壇、網誌等。香港人常用的社交媒體包括 Facebook、Instagram、WhatsApp、Line、Snapchat、香港討論區、高登論壇等。

體則更多關注本港議題。

- 香港市民普遍不太了解與新聞傳播相關的新技術。
- 《蘋果日報》最 high tech?! 動新聞為市民最了解的「新技術」。
- 香港市民對新聞來源的信任度不足，傳統媒體信任度最高，但亦只有三成市民表示信任。

調查結果

1. 整體新聞接觸與消費習慣

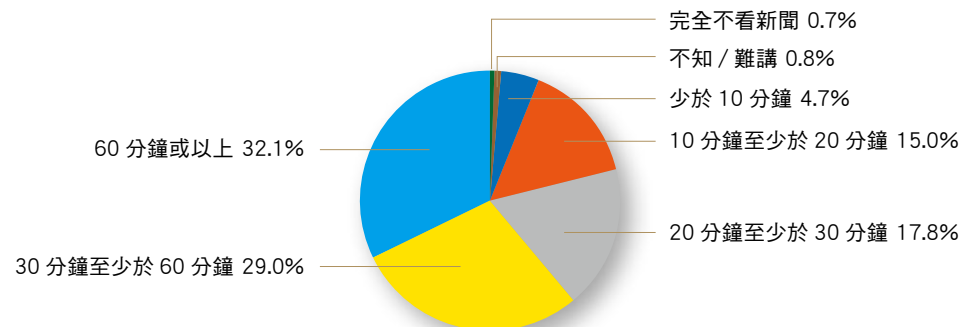
本部分主要描述香港居民整體新聞接觸與消費習慣。我們從新聞接觸時間、新聞獲取來源、新聞搜索以及分享習慣、付費和內容偏好這五個方面來描繪香港市民的新聞接觸與消費情況。

a. 新聞接觸時間

香港資訊媒體眾多，市場競爭激烈，市民接觸媒介資訊相當容易。調查結果發現，絕大部分香港市民每天都有透過不同渠道接觸或瀏覽新聞資訊。超過九成（93.2%）香港市民每天使用半小時以上的時間接觸新聞資訊；逾三成（32.1%）市民每天接觸新聞資訊的時間更超過一個小時。

根據人口統計特徵進行分組對比，有以下發現：

圖 2.1 每日平均新聞閱讀時間（包括任何媒體渠道）



- 1) 長時間接觸新聞資訊（即每天超過一小時以上）的男性（37.0%）比女性（27.6%）多（參考圖 2.2）。
- 2) 年輕群體（18 至 29 歲）接觸新聞資訊的時間相對較少，有超過一半年輕用戶（52.7%）每天接觸新聞資訊的時間少於 30 分鐘；壯年及老年群體接觸新聞資訊的時間更多（參考圖 2.3）。
- 3) 教育水平對新聞資訊接觸時間並無直接影響。
- 4) 高收入人群每天用更多時間接觸新聞資訊（參考圖 2.4）。

圖 2.2 每日平均新聞閱讀時間（跨性別比較）

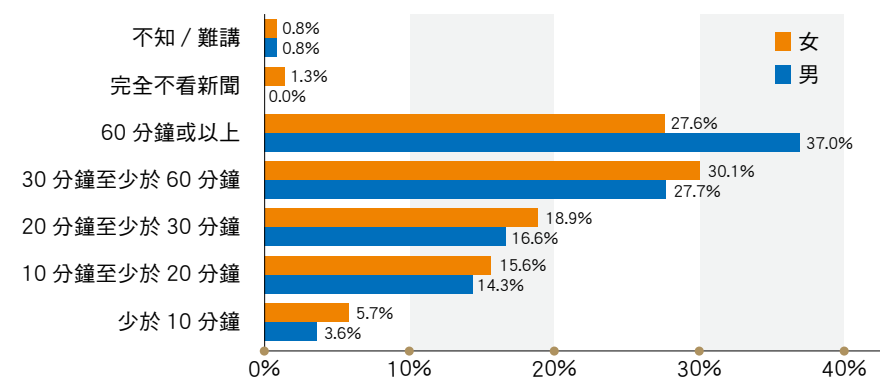


圖 2.3 每日平均新聞閱讀時間（跨年齡比較）

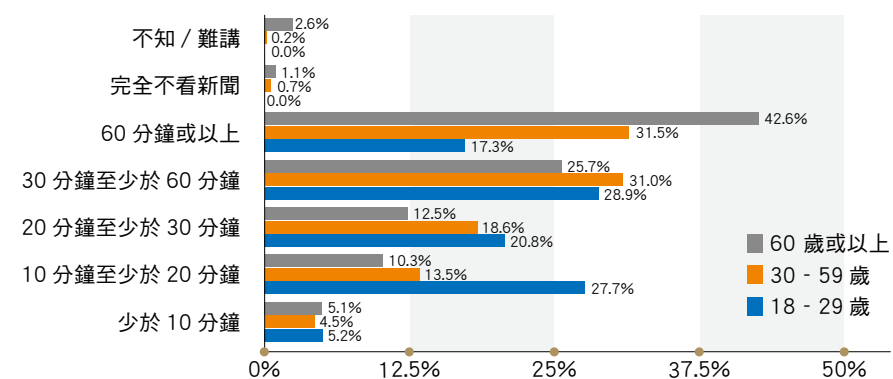
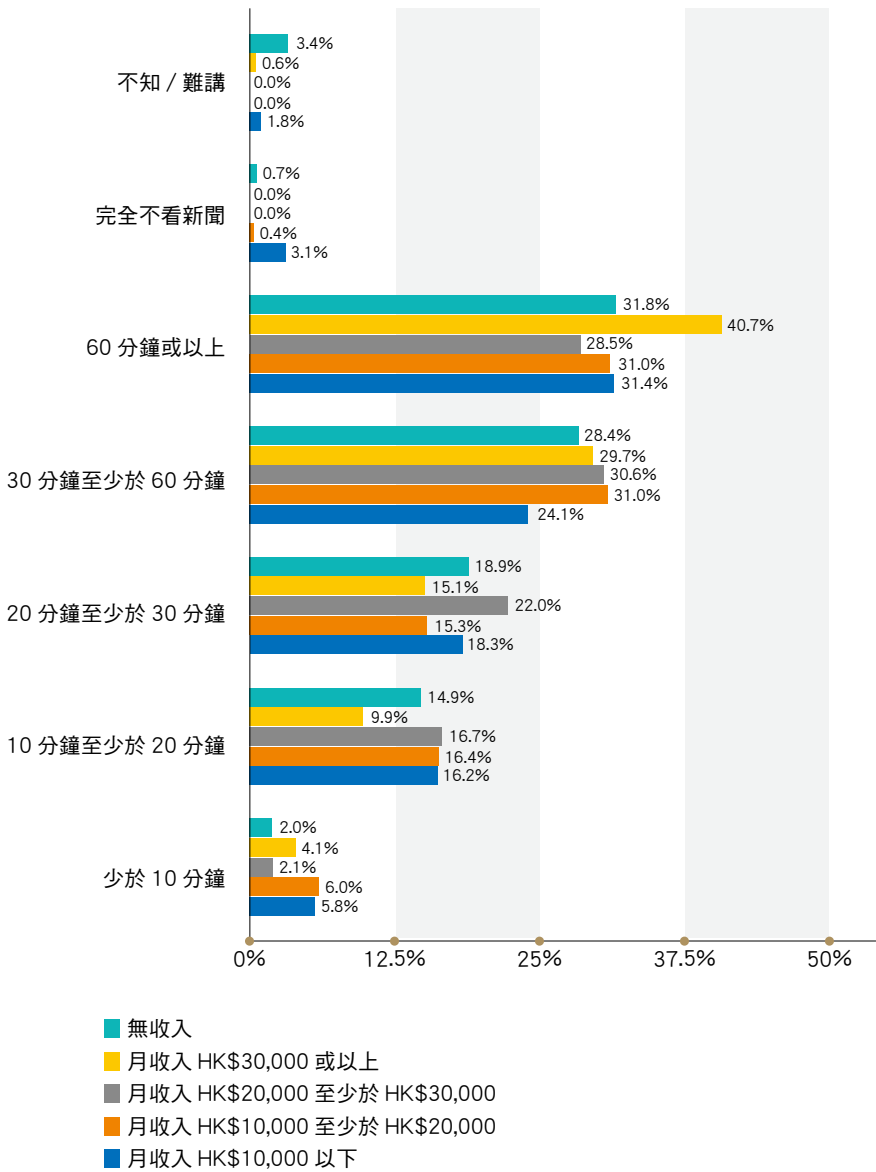


圖 2.4 每日平均新聞閱讀時間（跨收入水平比較）



b. 獲取新聞資訊的來源

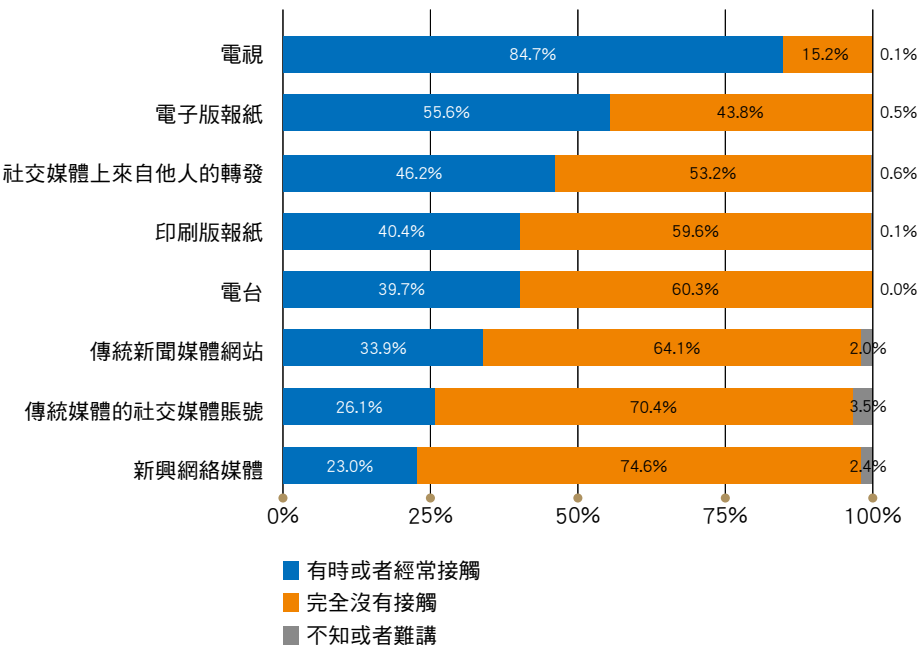
香港市民最經常使用的新聞資訊渠道仍然是傳統媒體，超過八成（84.7%）市民偶爾或者經常透過電視獲取新聞資訊；其次是電子版報紙，有近五成半（55.6%）市民選擇各報章的電子版閱讀新聞。約四成（40.4%）市民仍然是印刷版報紙讀者。近四成（39.7%）市民是電台新聞聽眾。

香港的互聯網與個人電腦普及程度高（Internet World Stats；香港特別行政區政府統計處，2018），新聞資訊的傳播數碼化程度亦很高。新興網絡媒體（如獨立 / 另類媒體）近幾年風生水起，但市場佔有率仍有提升空間，調查數據發現，有 23.0% 香港市民有時或經常通過新興網絡媒體獲取新聞資訊。

社交媒體互動性強、傳播速度快、製作及使用門檻低、涵蓋面廣，令個人、社群以至機構間的溝通模式出現本質上的變化，逐漸超越傳統媒體和溝通工具，發展成對社會有影響力的資訊來源。目前，香港各新聞媒體使用社交媒體作為複合傳播平台已經非常普遍（馬偉傑、黃子健、侯家豪，2016），通過多樣化的呈現方式，新聞媒體可以展現更為豐富的新聞資訊，並與受眾產生更多的互動。調查數據發現，有超過三成（33.9%）市民是傳統新聞媒體的網站用戶，有超過兩成半（26.1%）市民會關注傳統媒體所開設的社交媒體賬號。

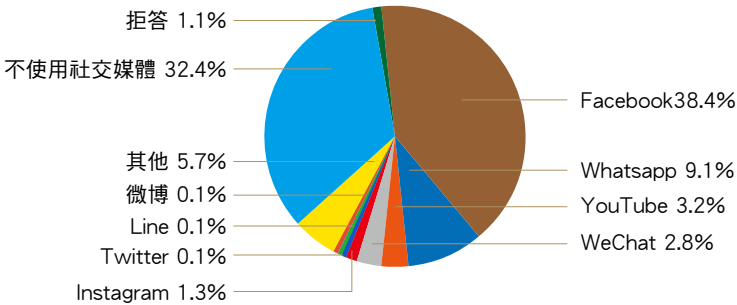
在社交媒體平台，除了新聞媒體設立的官方賬號，愈來愈多用戶亦會透過來自他人的轉發來獲取新聞資訊。超過四成半（46.2%）的市民會透過社交媒體的分享與轉發去獲取新聞資訊。這是繼電視（84.7%）和電子版報紙（55.6%）兩大傳統媒體之後，排名第三的本港市民常用新聞資訊渠道（參考圖 2.5）。

圖 2.5 新聞資訊來源比較



比較各社交媒體平台在香港的用戶規模，Facebook 是香港最主要的社交媒體平台。接近四成（38.4%）市民會透過 Facebook 獲取新聞資訊。這一結果與國際情況相似，在全球範圍內，Facebook 也是最常被使用的獲取新聞資訊的社交媒體平台（Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018）。使用率排在第二、第三位的社交媒體是 WhatsApp（9.1%）和 YouTube（3.2%），但二者與 Facebook 的用戶規模相比要小很多。與全球趨勢不同的是，在香港，Twitter 並不是流行的獲取新聞的社交媒體工具，僅有 0.1% 香港居民通過這個平台獲取新聞資訊（參考圖 2.6）。

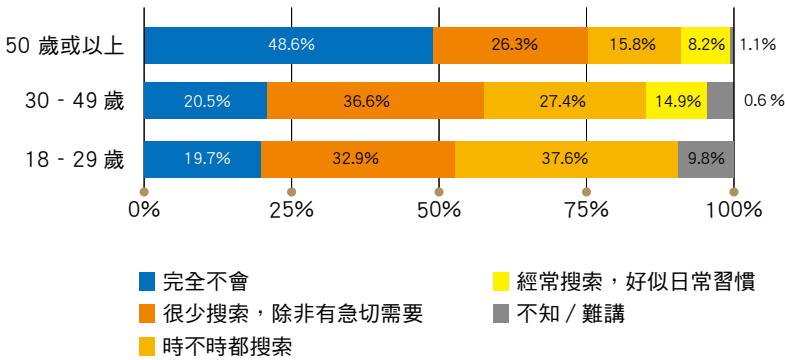
圖 2.6 社交媒體新聞資訊使用比較



c. 新聞搜索及分享習慣

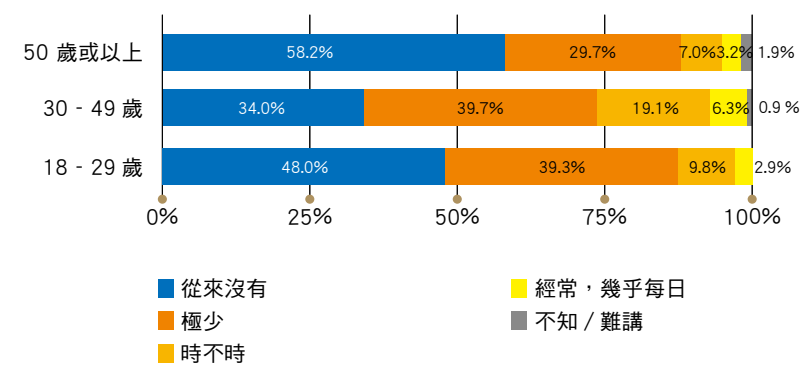
在數碼媒體環境中，用戶具有更大的自主性參與新聞資訊互動。因此，其資訊使用習慣包括了主動新聞搜索以及在社交媒體平台分享新聞資訊的經驗。然而調查數據發現，大部分香港市民仍屬於被動受眾；超過六成市民沒有（33.9%）或很少（31.0%）主動搜索新聞資訊，只有一成（10.8%）市民保持經常主動搜索新聞的習慣。年齡是區分搜索習慣的重要因素。根據年齡組別劃分，對比結果發現年紀愈大，愈不會主動搜索新聞資訊（參考圖 2.7）。

圖 2.7 主動搜索新聞資訊情況（按年齡組別劃分）



至於新聞資訊的分享，超過八成市民沒有（48.1%）或極少有（34.8%）在社交媒體上分享或轉發新聞資訊的習慣。根據年齡組別劃分，壯年用戶（30 至 49 歲）的新聞分享或轉發活動相對活躍，超過兩成（25.4%）市民時不時或經常分享或轉發新聞資訊（參考圖 2.8）。

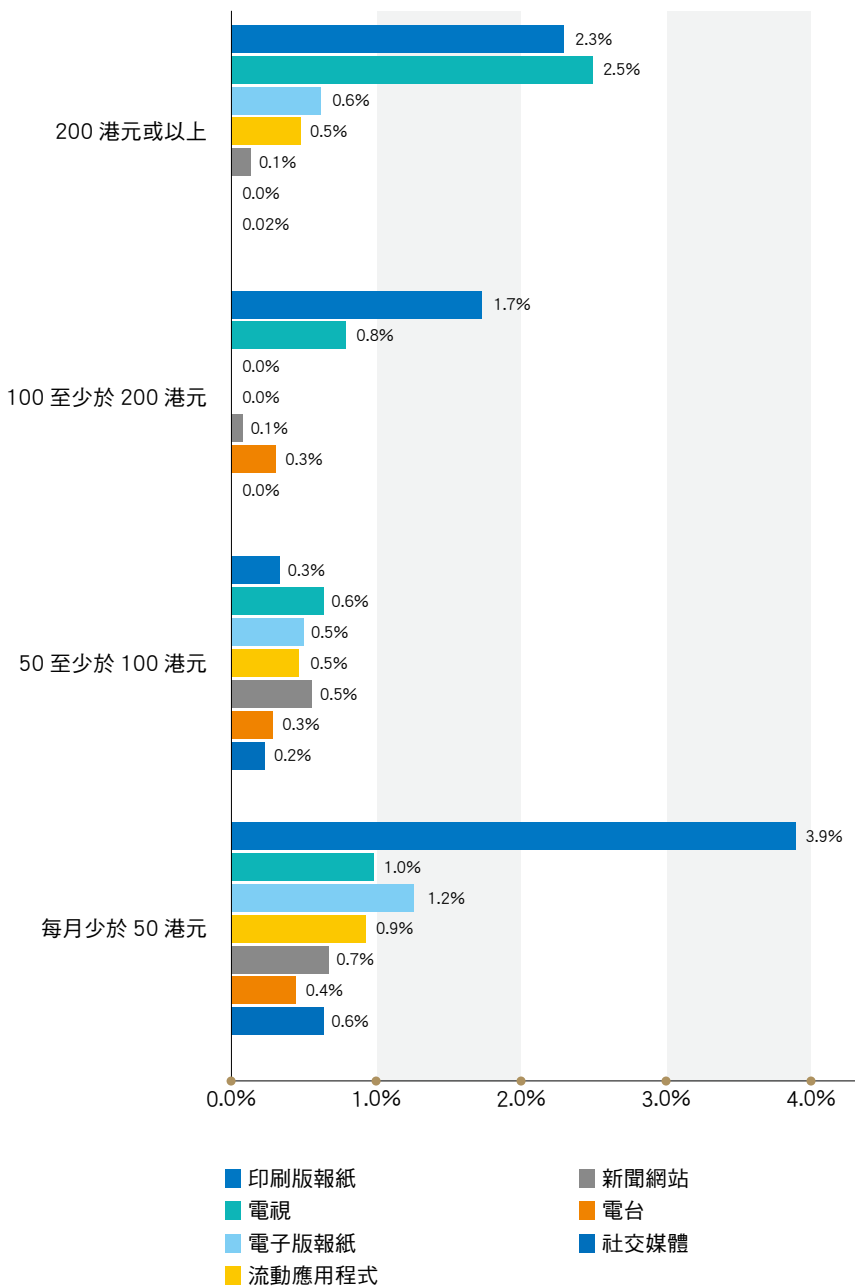
圖 2.8 社交媒體分享或者轉發新聞資訊習慣（按年齡組別劃分）



d. 付費情況

內容付費是近幾年新聞媒體進行商業模式探索的一項重要內容。調查發現，有接近九成（87.4%）的香港市民表示沒有透過付費形式去接收新聞資訊。在付費用戶中，較多花費在報紙（10.5%）和電視（4.9%）（參考圖 2.9）。雖然付費用戶比例較低，與世界其他地區相比，香港的新聞付費情況是排名靠前的。根據路透社新聞研究所與牛津大學最近的一項全球性研究數據（Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018），香港地區選擇為線上新聞付費的用戶比例在全球範圍內排名第四。線上新聞付費是指訂閱在線新聞，一併購買在線以及紙質新聞，或者為單篇文章支付過費用。

圖 2.9 以付費形式接收新聞資訊的比例



e. 內容偏好

香港市民通過傳統媒體，最經常關注的新聞資訊類型是本地民生（83.0%），其次是國際時事（71.1%）、健康與醫療（66.5%）及本地政治（63.7%）。而在社交媒體中，關注度較高的多為本地議題：包括本地民生及本地政治新聞。超過六成半（66.7%）市民表示他們在社交媒體和傳統媒體中關注的新聞資訊類型沒有不同（參考圖 2.10 及圖 2.11）。

圖 2.10 市民主要關注新聞資訊類型比較

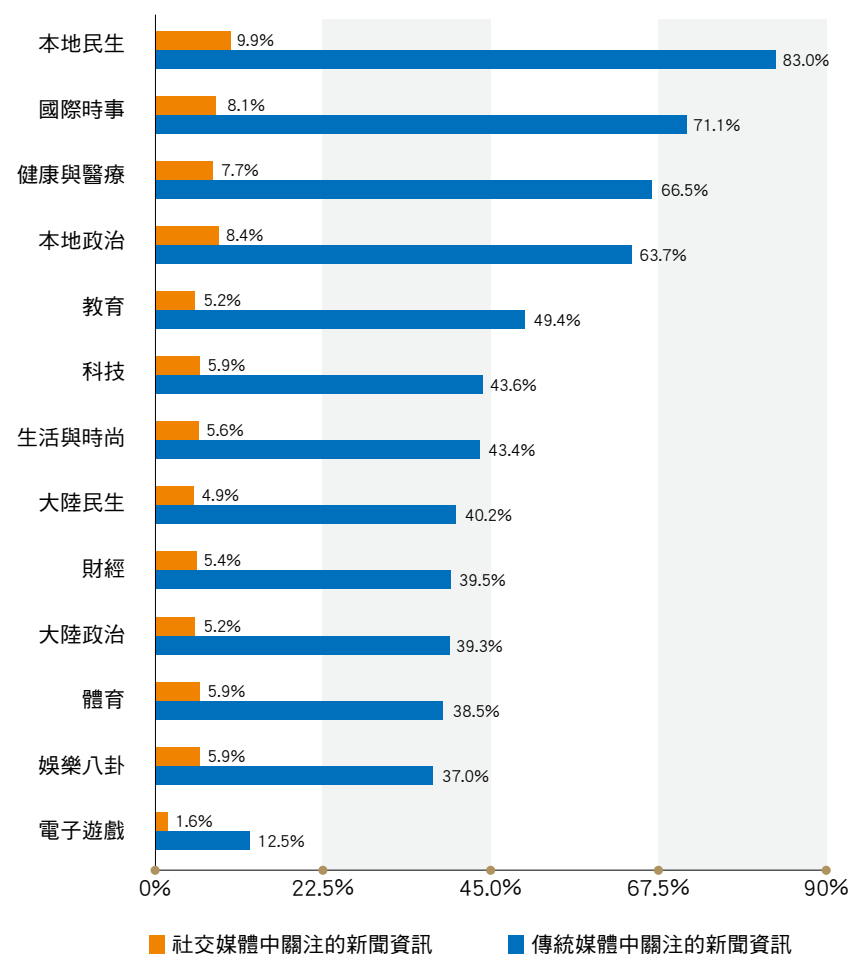
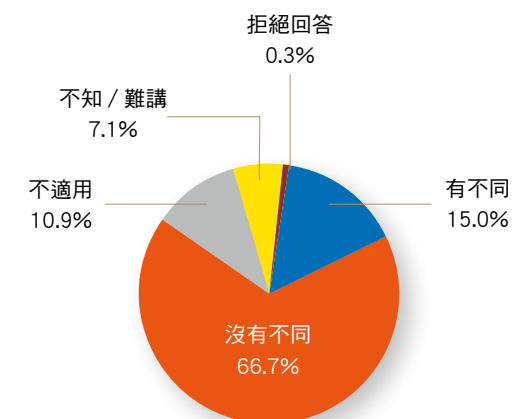


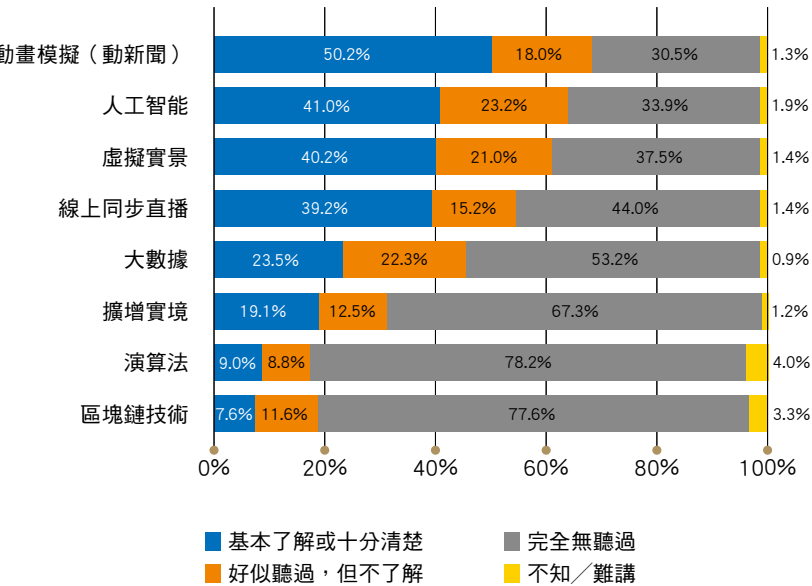
圖 2.11 社交媒體與傳統媒體最關注的新聞資訊是否異同



2. 技術認識與接觸

電腦及資訊傳播技術發展日新月異。作為市民日常接觸新聞資訊的主要渠道，媒體具有很大的潛力推動技術普及。一些本港傳媒嘗試在新聞生產和傳播過程採用新技術，但近幾年的技術發展速度似乎有一定放緩。本次用戶調查，研究團隊針對一些可能對新聞傳媒業界帶來影響的新技術向市民提問，希望了解他們對這些技術的熟悉了解程度，為本港新聞傳播發展帶來啟示。調查結果發現，最多香港市民（50.2%）表示熟悉動新聞（即利用動畫技術呈現新聞故事及相關資訊，通常形式誇張）（Lo & Cheng, 2017），最不了解或者沒聽過的技術包括演算法、區塊鏈技術及擴增實境（AR）。在市民印象當中，《蘋果日報》的技術應用水平最高，有 32.1% 市民認為《蘋果日報》是使用最多新技術或科技的新聞媒體（參考圖 2.12）。

圖 2.12 市民對新技術的熟悉了解程度



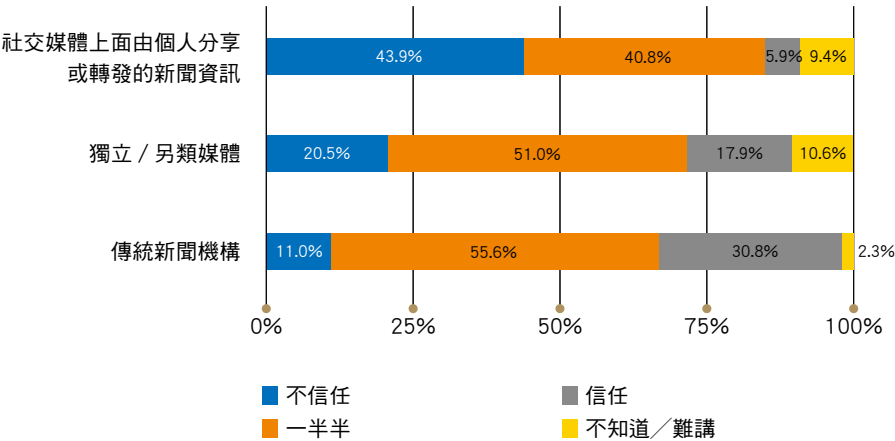
3. 新聞來源信任度

社交媒體的普及一方面增加了新聞資訊的傳播速度及內容總量，另一方面亦衍生出「假新聞」等問題。由於用戶能夠更自主、更便利地在數碼媒介中發放信息，信息的真確性以及信息來源的可靠性成為時下新聞資訊接觸的一大挑戰。

在本次用戶調查中，研究團隊分別就市民對傳統新聞機構、獨立／另類媒體、社交媒體人際傳播三種主要新聞資訊來源的信任度進行提問。調查結果發現，信任度較高的新聞資訊來源仍是傳統新聞機構，但比例亦只有三成多（30.8%）。香港市民對個人分享或者轉發的新聞資訊最不信任，有 43.9% 的市民表示不信任這類新聞資訊。市民對獨立／另類媒體的

信任程度也偏低，僅有 20.5% 市民表示信任獨立／另類媒體的新聞資訊。表示對現有新聞資訊來源信任程度一般的市民大約佔半數（傳統新聞機構 55.6%，獨立／另類媒體 51%，以及個人分享或者轉發 40.8%）（參考圖 2.13）。

圖 2.13 市民對三種主要新聞資訊來源信任度的比較



根據人口統計特徵進行分組對比，有以下發現：

1) 男性與女性用戶對三種主要新聞資訊來源的信任度並無明顯差異。但女性表示不確定或猶豫的百分比相對男性較高（參考圖 2.14.1 至 2.14.3）。

圖 2.14.1 用戶對傳統新聞機構新聞資訊的信任度（跨性別比較）

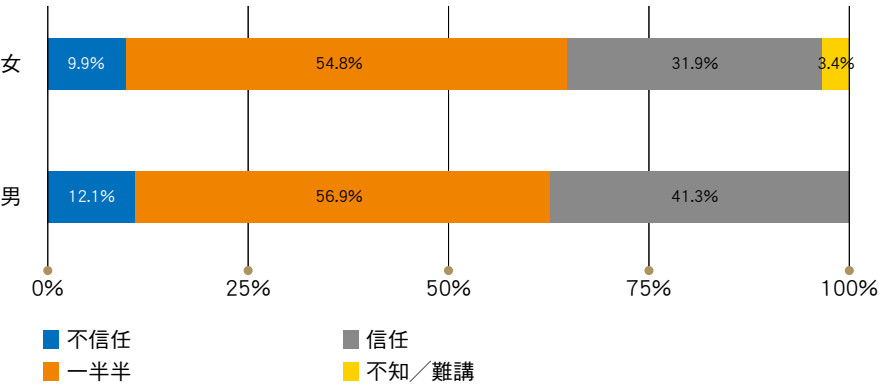


圖 2.14.2 用戶對獨立媒體新聞資訊的信任度（跨性別比較）

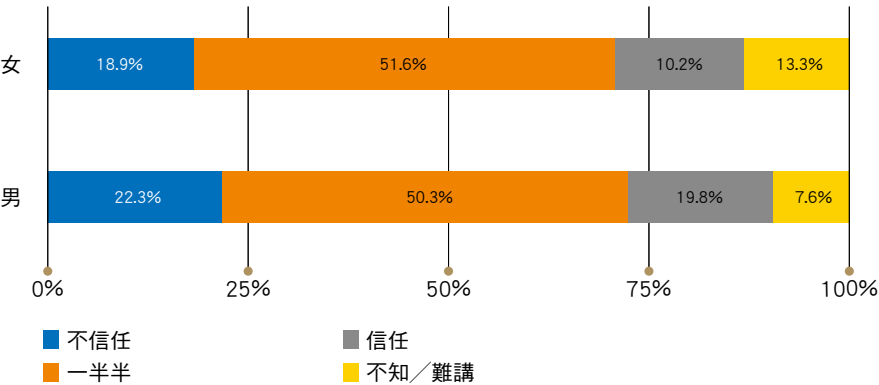
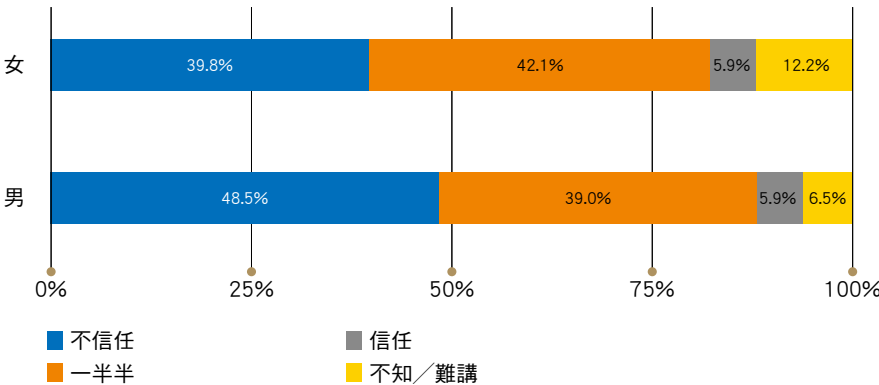


圖 2.14.3 用戶對社交媒體上面由個人分享或轉發的新聞資訊的信任度（跨性別比較）



2) 雖然之前的分組比較數據指出年輕群體（18 至 29 歲）接觸新聞資訊的時間相對較少，但更多年輕用戶對三種新聞資訊來源表示信任，比例相對壯年（30 至 49 歲）及年長（50 歲或以上）兩組用戶更高（參考圖 2.15.1 至 2.15.3）。

圖 2.15.1 用戶對傳統新聞機構新聞資訊的信任度（跨年齡比較）

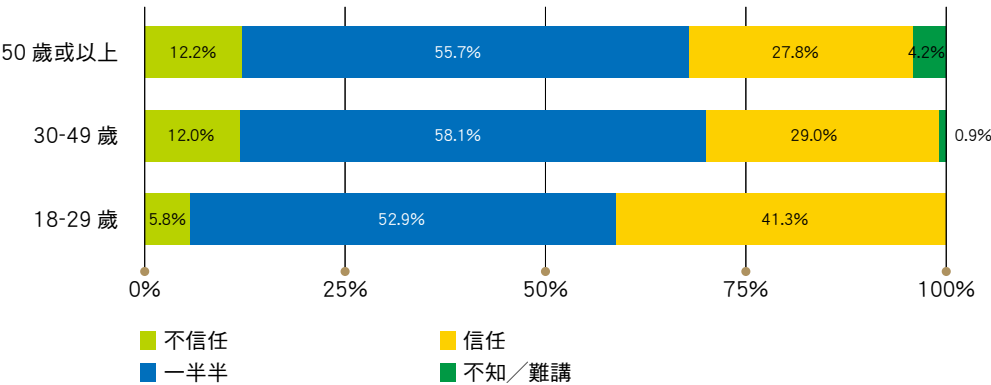


圖 2.15.2 用戶對獨立 / 另類媒體新聞資訊的信任度（跨年齡比較）

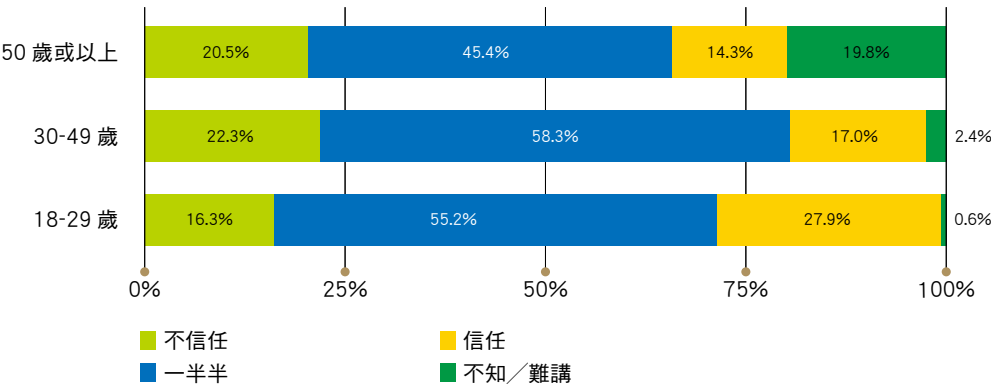
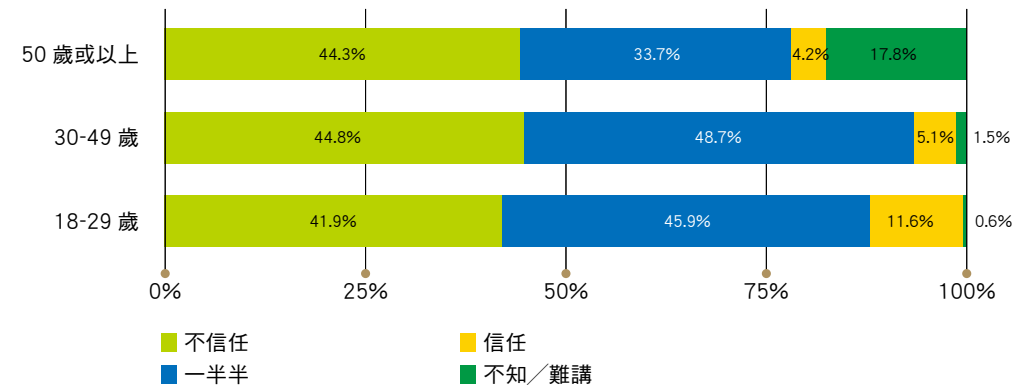


圖 2.15.3 用戶對社交媒體上面由個人分享或轉發的新聞資訊的信任度（跨年齡比較）



3) 更多教育水平較高（擁有大專或以上學歷）的用戶表示信任傳統新聞機構（41.4%）及獨立／另類媒體（23.1%）。更多教育水平較低（中學程度或以下）的用戶對於獨立／另類媒體（13.4%）以及社交媒體個人分享轉載（13.1%）的可信性表示不確定或猶豫（參考圖 2.16.1 至 2.16.3）。

圖 2.16.1 用戶對傳統新聞機構新聞資訊的信任度（跨教育水平比較）

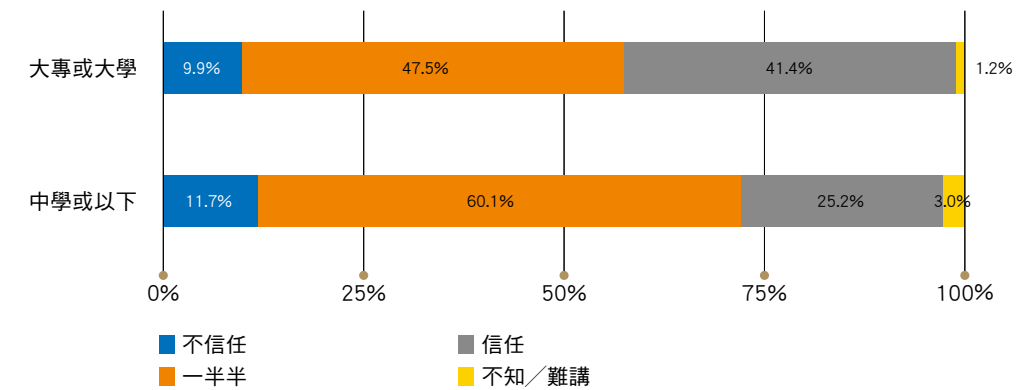


圖 2.16.2 用戶對獨立／另類媒體新聞資訊的信任（跨教育水平比較）

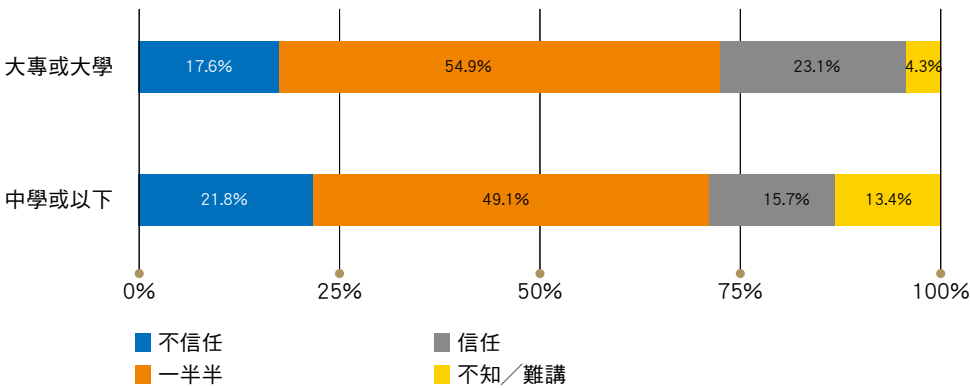
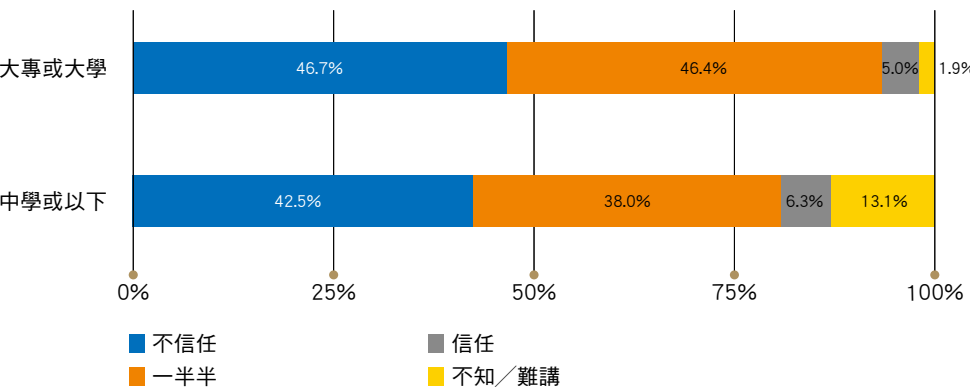


圖 2.16.3 用戶對社交媒體上面由個人分享或轉發的新聞資訊的信任度（跨教育水平比較）



4) 更多中高入息水平用戶對傳統媒體表示信任。低入息水平或無入息用戶對於獨立／另類媒體以及社交媒體個人分享轉載的可信性表示不確定或猶豫（參考圖 2.17.1 至 2.17.3）。

觀察性結論

香港流動網絡發達，智能流動裝置普及率高。市民透過數碼媒體接觸新聞資訊已經成為趨勢。傳統媒體在數碼化及積極拓展跨平台傳播的同時，應該保持內容質量及可信性。目前，傳統媒體仍舊是香港市民眼中新聞資訊的最主要來源。市民對傳統新聞媒體的信任度相對較高，儘管這一比例亦只有三成。不少傳統新聞媒體仍信奉「內容為王」，他們需要思考如何在複雜多變的數碼媒體環境中保證新聞質量和公信力，否則難以保持長足的發展。

社交媒體應考慮幫助用戶識別新聞的真實程度，通過干預措施加強用戶的新聞素養，讓用戶在充滿雜訊的社交媒體信息環境中鑒別真偽，或者真實資訊，免被誤導。

多數香港居民是被動的新聞獲取者，對於新聞內容生產者而言，這一發現的啟示是，新聞媒體可以藉助社交媒體平台或者新聞應用，推送新聞資訊給用戶。先前研究已發現，新聞提醒已經成為很多用戶獲取新聞的「邊門」（side door）（Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018），新聞媒體可以進一步利用這種用戶新聞獲取模式，把新聞推送給讀者。

香港市民接觸付費新聞資訊的意願及金額不高。新聞媒體需培養創新資訊消費習慣。

香港市民對新技術的了解有限，這與媒體本身利用新技術的程度有關。如何利用新技術增強市民接觸新聞資訊的體驗，長遠提高業界的生產力以及全港市民的技術普及水平，香港新聞傳媒有很大的發展空間，需付出更多的努力。

圖 2.17.1 用戶對社交媒體上面由個人分享或轉發的新聞資訊的信任度（跨教育水平比較）

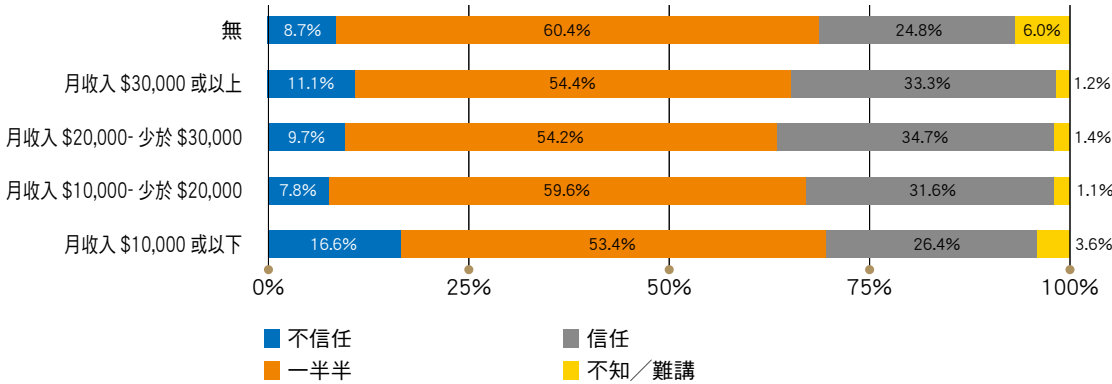


圖 2.17.2 用戶對獨立 / 另類媒體新聞資訊的信任（跨入息水平比較）

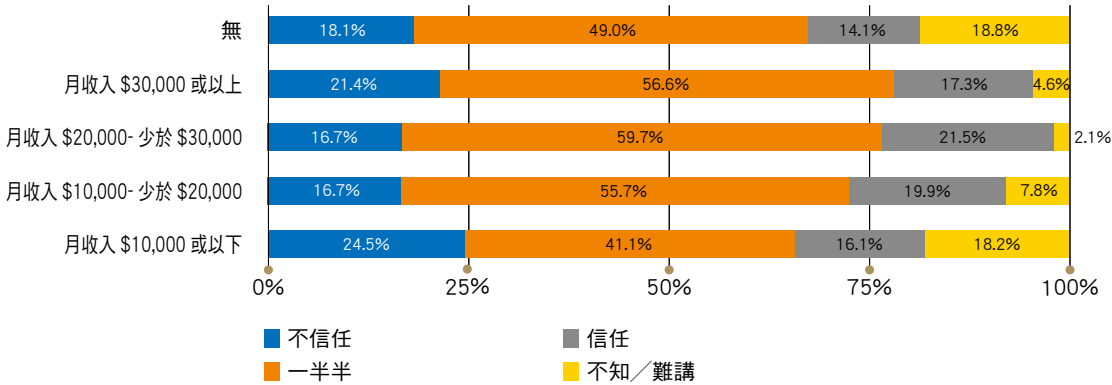
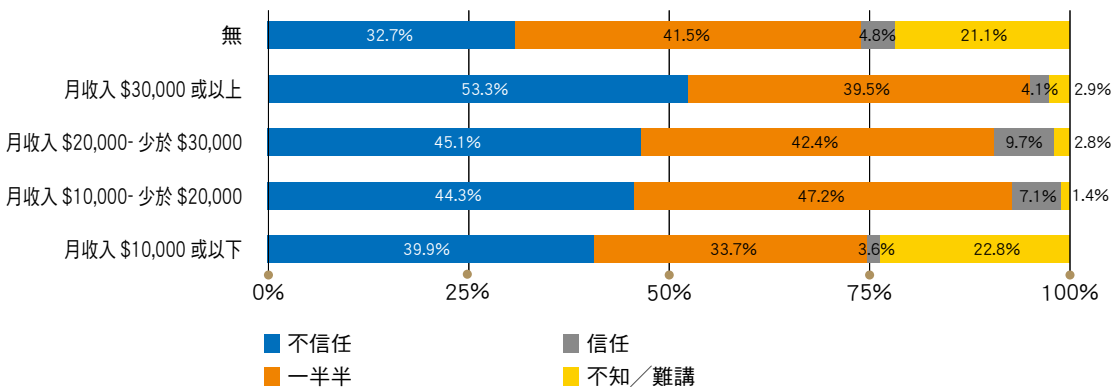


圖 2.17.3 用戶對社交媒體上面由個人分享或轉發的新聞資訊的信任度（跨入息水平比較）



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（黃磊 香港浸會大學傳理學院講師，張引 香港浸會大學傳理學院新聞系研究助理教授）

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● 第三章

香港媒體主管個人專訪

李文、滿子梵





專訪範圍與方法

為了深入了解香港媒體機構如何應對媒體技術的迅速發展以及因此而帶來的媒體市場環境的劇變，本研究項目在對香港媒體用戶及媒體行業從業人員進行調查的同時，也特別挑選了十三位香港媒體機構主管（詳細名單見本章附錄一）進行了深度訪談。

在挑選這十三位媒體主管時，我們一方面着重所屬媒體在行業內的影響力及代表性，另一方面也考慮到不同媒體平台的多元性，因此參與訪談的十三位媒體機構主管分別來自香港媒體業的不同領域，其中既包括報紙、雜誌、廣播、電視等傳統媒體平台，也同時包括了一些數碼原生媒體。

有關訪談在 2018 年 5 月至 7 月期間進行，每個訪談歷時 40 – 60 分鐘之間。訪談內容主要圍繞以下三方面的問題：

- 香港媒體機構在數碼發展上的現狀如何？新媒體技術對香港本土的媒體機構，尤其是傳統媒體機構造成的衝擊有多大？對目標受眾結構、內容生產模式及商業經營模式又帶來了多少影響？這些影響為媒體機構帶來了積極效果還是消極作用？媒體機構內部對這些影響和變化的態度又如何？

- 作為企業決策者，香港媒體機構負責人對新興的媒體平台及技術例如社交媒體、大數據、虛擬實境及人工智能等作出哪些回應？在數碼發展上又採取了哪些具體措施？其中在哪些方面採用了新媒體技術，而在哪些方面則仍然依賴傳統媒體技術？此外，香港媒體機構負責人在生產流程、組織架構和人力資源等方面又作出了哪些調整和部署？
- 香港媒體機構負責人為了應對媒體技術發展對市場環境及商業經營模式帶來的衝擊，如何制定其數碼發展戰略？是否會加大在數碼媒體技術上的投資、增加技術人員的人數及比例，以及加重技術人員在內容生產中的角色？是否為員工提供了相關的技術培訓？此外，香港媒體機構負責人對本身機構以至香港媒體業整體的未來發展前景究竟是感到樂觀還是悲觀？

香港媒體主管訪談概要

- 新技術的確對香港媒體機構、尤其是傳統媒體機構造成了巨大的衝擊，其衝擊主要體現在市場受眾與經營模式兩個方面。
- 香港媒體負責人普遍對香港媒體業短期前景感到憂慮，但同時也認為新媒體發展是未來重點所在。
- 增加信息發佈平台、整合信息發佈渠道是香港傳統媒體機構應對新媒體技術衝擊的最主要方式。
- 絕大多數香港媒體負責人仍然深信，無論發生什麼技術變革，「內容為王」的原則始終不變。

- 數據新聞、虛擬實境及可視化展示等新媒體技術的應用，在香港媒體業仍未普及，而採用人工智能技術使新聞內容自動化在香港更仍是空白。
- 缺乏資金支持和經濟回報的保障，是香港媒體機構對採用新媒體技術的態度審慎的主要原因。
- 香港大多數媒體機構缺乏長遠的數碼發展戰略，也甚少投入資源為員工提供新媒體技術培訓。

香港媒體主管的話



甘煥騰

香港報業公會主席、香港明報集團營運總裁

要平衡發展。暫時是辛苦的，兩邊都面對問題，第一，傳統媒體收入的萎縮，第二，新興媒體的投資和收入還沒反映出來，所以現在所有報業集團都面臨問題……我想我們是保守求穩的，我們的發展是保守穩定的，始終是報紙，要有起碼的銷量和讀者才可以建立有效營運模式。所以我們暫時還是做好報紙，但是也不妨發展數碼，因為我們一直在升級，摸索迎合市場大趨勢，這是我們一直的做法。



黃永亨

香港商業電台新聞及公共事務部總監

其實香港的市場不大，市場不大自然就沒有資源養這麼多的媒體。現在有這麼多媒體競爭，因此只能因貨就價，沒有資源就只能做到這樣了。新媒體名稱很多，但出來的就不一定有好的質量。即使傳統媒體，基於資源有限，也不能認真在新媒體上發展。因為發展新媒體，暫時沒有一個穩贏的方法。要叫老闆投錢去嘗試一樣可有可無的新東西，老闆就有很大的保留……傳統的收入已經差了，如何在有限資源裏面再抽出一些收入發展新媒體呢，這就要看經營者了。



李寶安

香港電視廣播有限公司集團行政總裁

其實新媒體對於我們來說，一定有三個特徵，放在一起才叫做新媒體。第一件事，新媒體一定是雙向的。大氣電波是單向的，可以點到點的。第二件事，新媒體是可

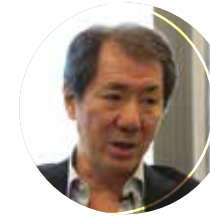
以流動的，不需要固定的地點，所以是可以用手機的，不同地點都可以接收到的。第三就是容量超凡，多到不得了……我們的方法就是利用新媒體和舊媒體的結合和協調達到很好的效果。這正正就是一個新的商業模式，我們一定要拿出來和新媒體競爭。所以競爭層面是包括總時間、人數、商業模式三樣東西，才能夠對抗，不然不能夠競爭。



梁家榮

香港電台 廣播處長

任何歷史悠久的媒體，究竟怎樣吸引及留住新媒體世代的用戶，這是一個很大的課題。同一時間，新媒體面對的另一個考驗是，新媒體需要分享，講求互動，有些節目很有互動性，有些內容發佈後，如何面對排山倒海正面負面的互動？這是一個考驗……私營媒體經營困難，其中一個主要原因，是受眾仍習慣不需要花錢去買想看的內容。作為內容生產者，內容若賣不到錢，如何維生呢？



于品海

香港零一創辦人兼行政總裁

如果以傳統新媒體的定義，我們早已是一個新媒體了，但是我們認為這種新媒體，是不夠的……這是一個生活平台，媒體、資訊，或者是觀點，是一個生活平台的一個切面，是一個很重要的切面，是一個界定了很多它的性格的切面，甚至界定了他的受眾群，是個怎樣的受眾群。所以我們經常說，這是一個以媒體為中心驅動力的生活平台。



李大宏

香港大公文匯傳媒集團副董事長兼總編輯

我們報紙要轉型，首先是編輯、記者要轉型。關鍵是觀念上要轉型，主動、自覺地適應媒體發展潮流和受眾需求的變化。說新媒體優先，並不一定意味着做報紙的人就有一種失落感。實際上，通過中央廚房機制和融媒體工作室建設，我們希望全部的人都參與，都在新媒體的平台上。集團旗下所有媒體的編輯、記者，未來都必須是全媒體記者。



郭艷明

香港信報總編輯

新媒體的發展真的是我們其中一個挺優先的事項，但推行的時候，很多東西要快之餘，也要深思的，因為有時候走錯、走歪了，會浪費時間，也會令焦點偏離的……《信報》系內很多環節都已經自動化了，我們未去到大數據的話，可以從小數據開始起步。至於人工智能，暫時來說，不是有沒有需要的問題，而是我們未想到這麼大，但我們會將現有的東西處理得更方便用戶，更加易懂。



趙應春

香港有線新聞執行董事

大家也知道傳統的經營模式是很難永遠地延續下去的，所有的傳統媒體都遭受到網絡資訊的衝擊，而消費者對於媒體的消費模式也有所轉變。最大的挑戰是怎麼能夠說服消費者對於有素質、高品質的信息內容，其實是需要有代價的，是需要付錢的。這個可能需要一段時間，或者是一個鐘擺效應。



楊劭銘

香港端傳媒總裁

我們經營媒體業務要做三件事。第一是內容，講內容比較傳統一些，每個媒體都講究內容，關鍵看有沒有新的模式，如果只是別人供稿我給稿費，那麼就和一般報紙沒有什麼不同。但是會不會出現新的模式呢，譬如大家按訂閱收入來分成，我們也想試一下。那第二呢，我們叫運營，今年四月剛成立了一個新的部門，叫用戶運營部，整合了與會員銷售相關的各方面力量。這個新架構起碼在中文媒體之中是沒有過的。總之我認為，有好的文章（即商品）不代表你有好的銷售，所以要把兩樣東西加起來。第三點就是我們叫產品（即各類 IT 技術和系統），我們有好多事情是要靠產品去推動的，如流量或者經營。怎樣從產品的角度解決文章分享的問題，怎麼改進用戶閱讀的體驗，怎樣讓大家更方便地分享自己的觀點，我們還有很多事情要做。



張劍虹

香港壹傳媒集團行政總裁

雖然「訂閱」模式現在在香港不太行得通，大部分媒體都是免費，但是在國外（如《紐約時報》、《華盛頓郵報》、《華爾街日報》）是成功的。或許有一天我們要走回這一條路，要做回這樣東西我們才能生存。只是靠廣告的話，未必可以，我們正在計劃是否要走這一條路，向這個方向走……希望將來有一天訂閱會成為我們收入的主要來源。雖然說在報攤買報紙的人是少了，但希望網上訂報紙或通訊的人會變多，可以補回損失，這是我們的想法。



蕭世和

香港星島新聞集團行政總裁

我覺得現在新媒體在商業上的土壤仍然很稀薄，可能同生態一樣，我們都知道生態的發展這樣，先有一些地衣，然後慢慢有一些進步一點的植物，跟着有些原始動物，複雜動物。如果你問我現在香港新媒體的狀態，就由地衣的階段進入到初級植物或者高級植物的階段，但是我們其他的傳統媒體已經是先進動物了，所以我們作為一個先進動物，怎樣要適應一個還在初級階段的氣候。我覺得未來幾年，我其中一個任務就是要挑戰，怎樣過渡然後成為一個倖存者，這是我們的目標。



劉可瑞（Gary Liu）

南華早報出版有限公司行政總裁

我相信，人工智能將以一個我們大多數人尚未討論過的方式引領媒體業。我已經多次提到，我相信人工智能將改變自然語言處理及自然語言生成，這兩項技術將來會對新聞業帶來巨大影響。

訪談內容總結

1. 新技術的確對香港媒體機構、尤其是傳統媒體機構造成了巨大的

衝擊，其衝擊主要體現在市場受眾與經營模式兩個方面

接受訪談的香港媒體負責人都承認，新媒體技術的出現，的確對本身所屬的媒體機構帶來了巨大的衝擊。具體而言，新媒體技術對媒體機構造成的衝擊主要表現在兩個方面：市場受眾與經營模式。

從用戶層面來看，第一，互聯網的發展無疑改變了香港公眾的媒體消費習慣，由於網絡開放和即時發送等技術特性，愈來愈多的用戶選擇消費網絡平台上免費、快速的媒體內容信息，而愈來愈少使用傳統媒體渠道進行內容消費。有受訪者為此指出，這也為香港媒體的經營帶來困難，因為愈來愈多的香港受眾習慣於不需要付費就看到想看的內容，因此當媒體內容很難賣錢的時候，內容生產者也難以生存了。

其次，用戶對網絡信息的消費改變了其對信息的偏好，視頻成為最受歡迎的新聞體裁，傳統媒體長篇報道的方式不再為當下大多數受眾所習慣。不過，也有多位受訪的香港媒體機構負責人堅信，無論媒體形態發生什麼變化，仍會有一些人繼續使用紙媒作為獲取媒體內容信息的主要渠道，因此紙媒在未來仍有生存空間。

第三，用戶群體老齡化趨勢顯現，年輕受眾更傾向於從以社交媒體為主的網絡平台獲取信息，同時，其對於媒體的選擇與對於信息的視野不再局限於本地，變得更加國際化。此外，多位受訪者也提到本身所屬的媒體機構正在向「年輕化」和「國際化」調整，以吸引年輕受眾和國際受眾、擴大自己的受眾市場規模。

相比之下，新媒體技術的發展對香港媒體機構的商業經營層面的衝擊

更加棘手。各家傳統媒體原有的以出版發行和商業廣告為核心收入來源的商業模式都受到了不同程度的衝擊。雖然如此，商業廣告仍舊是目前香港大多數媒體的主要收入來源，至於新的商業運營及盈利模式則仍在探索之中。事實上，不少受訪的香港媒體機構負責人均用「摸着石頭過河」、「正在考慮」、「努力開拓」等字眼來描述對於新的有效商業模式的探索狀態。

總體而言，目前香港媒體機構普遍在探索的商業經營方式有：第一，利用媒體平台優勢提供線下增值服務，例如辦書展、組織研討會或展覽會、組織旅行團等等；第二，發展電子商務，例如直接售賣廣告客戶的產品；第三，用戶付費，比如建立付費牆、實行會員制。然而對於數碼平台的付費模式，各位受訪者的觀點不一。有的觀點認為「該模式在香港不一定行得通」，但也有人表示，雖然目前數碼平台付費方式在香港的收效甚微，但將來一定是未來媒體的主要收入盈利來源，因此值得繼續努力探索。

2. 香港媒體負責人普遍對香港媒體業短期前景感到憂慮，但同時也

認為新媒體發展是未來重點所在

受訪的香港媒體負責人在訪談中普遍表現出對香港媒體業短期前景的憂慮。首先，他們認為，香港只有七百萬人口，市場規模有限，然而媒體市場發達、媒體機構數量眾多，而且彼此競爭激烈；當網絡應用在香港普及之後，香港受眾又很容易接觸到來自其他國家和地區的外國媒體內容，使原本趨於飽和的市場競爭更趨激烈。在此激烈的競爭狀態下，傳統媒體經營模式在新的媒體環境中逐漸瓦解，而新的媒體經營模式尚未成形，使大部分香港媒體機構深陷「很難做」甚至「勉強維持」、「掙扎」的狀態。

其次，過去十幾年以互聯網為核心的技術革新，為社會各個領域帶來轉型，媒體領域是此次技術革新波及的最為顯著的領域之一，然而，香港

紙媒的逐步衰落尚未帶來香港數碼媒體平台的迅速成熟，正如一位受訪者所說：香港新媒體「在商業上的土壤仍然很稀薄」。總結各位受訪者的看法而言，香港媒體市場目前仍處於不斷變化和調整的階段，無論傳統媒體，還是數碼原生媒體，絕大部分香港媒體機構在短期內都還將繼續在一種不明朗的狀態中掙扎求存。

與此同時，所有受訪者都一致認為，發展新媒體、新技術是未來大勢所趨，並紛紛把發展新媒體作為其目前和未來媒體管理工作中不可缺少的一部分。多位受訪者明確表示，未來兩三年內的主要工作，就是進一步推行新媒體改革，以新的理念打造新媒體平台，並嘗試推出新的商業模式；不過，也有個別受訪者表示，雖然發展新媒體勢在必行，但推行新媒體改革需要循序漸進，要在做好原有媒體平台的基礎上發展新的數碼內容平台。

3. 增加信息發佈平台、整合信息發佈渠道，是香港傳統媒體機構應

對新媒體技術衝擊的最主要方式

在互聯網時代來臨初期，絕大多數香港傳統媒體應對衝擊的第一步，便是紛紛建立網站，將線下的內容放到線上；後來，社交媒體愈來愈普遍以後，香港媒體機構又逐漸開始在 Facebook 等社交媒體平台上建立賬戶；到了智能手機成為手機市場主流之後，香港各家媒體機構開始設計與運營自己的流動應用程式，在手機上開闢移動內容平台。所有受訪者都表示，自己所屬的媒體機構均已實現了多平台發展的態勢。對於傳統媒體來說，除了原有的報紙、雜誌、電台、電視之外，也大都擁有自己的網站和社交媒體平台；而對於數碼原生媒體來說，其信息發佈也並不局限於在單一平台上。

此外，部分香港媒體機構也開始嘗試進行不同平台的內容細分和内容

分發渠道的融合。在發展多元內容平台的基礎上，有部分香港媒體已經開始根據不同平台的技術特性發佈不同的內容，而不是只簡單地將同樣的內容以同樣的形式在不同的平台上發佈，例如多位受訪者表示，他們在傳統媒體上發佈的內容更為嚴肅、更有深度、寫作技巧更加豐富，相比之下，線上的平台更加注重用戶體驗、更多影像、以吸引流量為主要目的。

另一方面，渠道融合是另一個同時處理多個平台的趨勢，最為簡單的一個方式，是將某一內容只在免費平台上進行部分展示，讓想要獲得完整版本的受眾進入付費平台獲得完整版本；還有媒體將同樣內容以不同體裁分別放在不同的平台上，使用戶想要獲得全面的信息需要同時閱覽其線上和線下的媒介產品，其中一位受訪者就提到「報網合一」的理念，例如在臉書上的內容也會下載到網站上，而網上內容入了內容庫之後，也可以放到手機的流動應用程式中，其中內容除了文字之外，還包括多媒體內容。

4. 絕大多數香港媒體負責人仍然深信「內容為王」的原則不變

在訪談中，絕大多數香港媒體負責人都表示，仍然深信「內容為王」的原則不變。他們普遍認為，一家媒體真正的價值在於內容，而技術只是服務於內容的工具。媒體人始終是「做內容的人」，「內容為王」是他們的共識，生產高質量的內容在如今這個資訊氾濫的時代更加重要。因此，在媒體機構為適應新的傳播語境、商業語境、技術語境的過程中，內容的質量不應因此下降，而任何新媒體技術的發展也需要建立在維持生產高質量內容的先決條件上，正如一位受訪者表示，新聞媒體機構「始終還是內容先行」，因此「不可能沒有一個紮實、經得起考驗的新聞內容」，而技術、科技對新聞媒體機構而言「是一個支援」。

對內容的堅持也體現了受訪者作為媒體人的社會責任感，同時也反映

出，雖然香港新聞媒體業近年來面臨多重壓力，但新聞專業主義在香港新聞媒體業中並未式微。受訪的香港新聞媒體負責人普遍認為，「真實」、「準確」地進行新聞報道仍是新聞從業者的基本追求，而新聞機構應該承擔起其社會功能、要有專業操守。此外，一些受訪者也指出，媒體機構在使用新媒體技術時也需注意與遵循作為媒體人的道德準則，比如在應用大數據技術採集用戶數據的過程中，有關機構也應該盡全力保護用戶的個人隱私權益。

5. 數據新聞、虛擬實境及可視化等媒體新技術的應用，在香港媒體業的應用仍未普及，而採用人工智能技術使新聞內容自動化在香港更仍是空白

在訪談過程中，大多數香港媒體機構負責人都表示，已經關注到香港以外的一些媒體機構在新聞內容的製作上開始使用大數據、人工智能、虛擬實境（VR）及擴增實境（AR）等新媒體技術，而且有少數香港媒體機構近年來也在做有關的嘗試，例如：香港個別電視台已開始製作 AR 新聞內容，還有部分香港新聞媒體機構也開始使用無人機進行新聞報道的拍攝。也有個別受訪者表示，自己所屬的媒體機構已在使用大數據技術，為受眾進行個性化的內容推送。不過，目前只有少數香港媒體機構採用上述這些新媒體技術，換言之，這些新媒體技術在香港媒體行業尚未普及使用。

另外，近年來，不少中外新聞媒體機構都已在嘗試運用人工智能（AI）技術製作新聞內容，其中包括用機器人代替記者撰寫財經新聞、體育新聞及天氣新聞等新聞內容。不過，受訪的香港媒體機構負責人在使用人工智能製作新聞內容上則態度不一。有的受訪者認為，機器人始終無法代替人進行新聞內容生產。但也有受訪者表示，人工智能在媒體業的廣泛應用是

大勢所趨，而且一定會成為大力發展的主流。不過，即使如此，絕大多數受訪者仍然表示，暫時無意考慮採用人工智能技術使部分新聞內容的製作過程自動化，還要等未來人工智能技術發展成熟之後再說。換言之，目前尚未有任何香港媒體機構在內容製作上嘗試使用人工智能技術。

6. 缺乏資金支持和經濟回報的保障，是香港媒體機構對採用新媒體技術的態度審慎的主要原因

絕大多數受訪者均表示，經濟因素是阻礙其所在的香港媒體機構採納及發展大數據、虛擬實境、人工智能等新媒體技術的主要原因。

首先，有受訪者表示，媒體機構畢竟不是科技研發者，而只是技術使用者，而引進新技術往往需要高昂的資本投入，目前香港媒體行業的發展正處於不明朗的狀態，大多數媒體機構原有的商業模式正受到前所未有的衝擊，而耗費大量金錢投資一項新媒體技術，也並不能保證在短期內就獲得經濟上的回報，因此造成大多數香港媒體機構在投資新媒體技術上採取較為審慎的態度。正如一位受訪者表示：「香港的市場這麼小，又投入這麼多力量搞網媒的科技、硬軟件，其實在經濟效應上比較低。」

另一方面，從內容生產的角度考慮，不少受訪者也認為，新媒體技術常常只是「噱頭」，更多的是改變內容呈現的方式，而不是內容本身，而作為「做內容的人」，將資源大量投入到發展新媒體技術上更是捨本逐末的做法。

其次，投資與引進新媒體技術和器材，也意味着有關媒體機構要招募專業技術人員使用、運營、維修甚至更新有關技術和器材。然而目前在香港眾多傳統媒體機構中，只有個別媒體機構成立了專門負責生產新媒體內容、運營新媒體平台、或者探索新媒體生產模式的發展部門或小組，而絕

大多數受訪者所屬的媒體機構都基本維持原本的組織架構不變，並沒有因為新媒體的出現而相應地進行大規模的組織架構重整。換言之，香港不少傳統媒體機構中的新媒體內容生產，仍舊與傳統平台融合在一起。普遍的情況是，記者與編輯在進行內容生產的同時兼顧新媒體平台內容需求。在這樣的情況下，雖然部分香港媒體已經擁有自己小規模的技術團隊，但包括數碼原生媒體在內，技術人員還處於相對邊緣化的位置，正如一位受訪者表示：「IT 在內容的角色並不太強」，技術人員主要負責平台的運營與維修，並不參加日常的新聞生產；也有受訪者表示，自己所在的機構並不會專門僱用技術人員，如有例如數據挖掘方面的技術需求，會選擇租用特定軟件或把有關項目外包給專業公司。

7. 香港大多數媒體機構缺乏長遠的數碼發展戰略，也甚少投入資源為員工提供新媒體技術的培訓

從與香港媒體機構負責人的訪談中發現，大多數香港媒體機構並沒有制定長遠而且清晰的數碼發展戰略。因此，不少媒體機構在採用新媒體技術時並非有計劃地推行，而往往通過一些對新媒體技術感興趣的資深員工，或者新入職的年輕員工甚至實習生的個人主動性來嘗試使用新媒體技術。換言之，新媒體技術的採用過程並非由上而下，而是由下而上。不少受訪者表示，近年來新媒體技術不斷湧現，媒體機構內從業時間較長、經驗較為豐富的資深員工都難以迅速追上媒體技術的發展潮流，他們大多仍舊按照長時間積累的慣常做法進行日常的內容生產工作，即使採用新技術，也還停留在技術要求相對簡單的水平，例如數碼影像採編、數碼平台信息發佈等。

在人力資源發展方面，絕大多數受訪者都表示，其所屬的香港媒體機

構均尚未建立成熟的新媒體技能培訓系統，也沒有投入太多資源進行員工培訓，更沒有設立內部培訓部門，更多的是鼓勵員工在工餘時間自發學習新媒體技術，有些媒體機構則不定期邀請專家為員工授課，也有媒體會為員工自發參加技術相關課程提供經濟補貼。但總體來說，大多數香港媒體機構並未將發展新技術放到戰略層面，他們傾向於通過對新技術感興趣的既有從業者、新入職的年輕從業者或實習生即基層員工進行自下而上的技術革新。

附錄 接受訪談的香港媒體負責人名單

電視廣播有限公司集團行政總裁 李寶安

香港電台廣播處長 梁家榮

有綫新聞執行董事 趙應春

商業電台新聞及公共事務部總監 黃永亨

明報集團營運總裁 甘煥騰、明報集團業務總經理 高志毅

星島新聞集團行政總裁 蕭世和

南華早報出版有限公司行政總裁 劉可瑞（Gary Liu）

端傳媒總裁 楊劭銘

香港信報總編輯 郭艷明

香港零一行政總裁兼總編輯 于品海

大公文匯集團副董事長兼總編輯 李大宏

壹傳媒集團行政總裁 張劍虹

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● 第四章

香港媒體內容生產調查

王祺樂、張昕之、滿子梵





背景

數碼信息與傳播技術（Information and Communication Technologies，簡稱 ICTs）在新聞機構中扮演着愈發重要的角色，比如社交媒體、沉浸式媒體（如增強現實／虛擬現實〔AR／VR〕），以及數據科學應用（如數據驅動新聞）等。這些數碼信息與傳播技術已融入新聞生產過程的每一個環節，包括最初的新聞選題策劃，到之後的新聞採集、信息驗證與比對、新聞故事的展現方式，乃至新聞發佈之後的內容推廣和讀者參與等（Gulyas, 2013, 2017; Hanusch, 2017; Olausson, 2017; Ottovordemgentschenfelde, 2017; Spyridou, et al., 2013）。諸多著名的傳統媒體都新創立了使用新數碼信息與傳播技術的團隊，比如 *The New York Times* 的 VR 團隊，以數據新聞見長的 Upshot 團隊，*Guardian* 的 Guardian Interactive，Bloomberg 的 Bloomberg Graphics，*Financial Times* 的 FT Data，BBC 的 BBC News Lab 等。也有一些數碼原生媒體在嘗試用新技術進行新聞報道，如 BuzzFeed 和 Vice。

在這種背景下，本研究項目旨在闡明數碼信息與傳播技術如何被應用於新聞生產的各個流程，包括尋找故事、新聞採集、信息核實、新聞故事

的展現方式，乃至新聞發佈之後的內容推廣和讀者參與。本項目還旨在探求媒體專業人員與新聞領域以外的專業人員進行跨學科合作的程度。隨着數據驅動新聞和沉浸式媒體的出現，程序員和設計師這兩類人員在新聞編輯室中扮演着至關重要的角色。與此同時，具有傳統新聞技能的媒體從業員則應持續學習，以適應媒介數碼化轉型的最新發展。

本項目以香港傳媒機構為研究案例。通過一個針對媒體機構媒體從業人員的調查研究，揭示了香港新聞採編人員採用新興信息通信技術的大致情況。本項目還描述了不同領域專業知識的從業者之間如何合作，以及提出一些關於傳媒機構數碼轉型的觀察式結論。

研究背景和研究問題

本項目聚焦於香港，一個媒體高度發達的城市，具有較高的互聯網和社交媒體普及率。之前已有若干學者研究了香港記者如何在其新聞採編工作中運用數碼信息通信技術。例如，在社交媒體方面，Chu（2012）採訪了幾位經常使用博客的記者，並分析了他們的博客文章；他發現這些記者使用博客來了解他們的職業生涯並闡明他們的新聞價值觀和意識形態，但其與讀者的互動性有限。至於數據新聞，只有極少數媒體組織採用數據驅動新聞報道。

因此，本項目對比傳統媒體（包括印刷媒體、廣播媒體、出版社和其他主要新聞生產和運營方法在信息時代之前就出現的媒體組織）和數碼原生媒體（主要的新聞生產和運營均基於網絡）之間採用數碼技術的差異。在香港，整體媒體市場由幾家大型傳統媒體主導，而數碼原生媒體則處於相對初級的階段，數碼原生媒體的從業者數量較傳統媒體要少。

針對香港本地的新聞機構，本項目提出以下兩個問題：

問題一：數碼信息與傳播技術在多大程度上介入了新聞生產過程的若干方面，包括：

1. 新聞選題策劃；
2. 新聞消息來源；
3. 信息驗證甄別；
4. 數據的獲取方式；
5. 新聞報道的呈現方式；
6. 內容推廣和觀眾參與

問題二：新聞生產團隊中不同專業背景的從業人員在何種程度上合作、並參與新聞生產的轉型？

研究方法

參與者與流程

本研究項目使用網絡問卷調查法，調查始發起於 2018 年 7 月，截至 2018 年 8 月，為期兩個月，共有 255 人參與且完成了調查。參與問卷受訪者為香港本地媒體機構中的新聞媒體從業者。本研究對象範圍為參與新聞生產各個方面的專業人士，其中包括前線記者、編輯、新聞內容設計師，以及新聞調查方向負責數據採集與可視化的程序員。此次研究關注的是香港本地新聞媒體組織。本研究使用滾雪球抽樣（snowball sampling）方法選取受訪者。受訪者徵募自香港數家專業新聞組織，例如香港記者協會（始建於 1968 年）及香港新聞工作者聯會（始建於 1996 年）等；同時，研究團隊也聯絡了十三家新聞機構的編輯部管理人員，請求其在其新聞機構

內部通過電郵、即時通訊工具等方法發放問卷。該樣本徵募方法涵蓋了來自不同種類新聞機構（紙媒、廣播電視以及網絡媒體均有包括）的媒體從業者。本研究在開始前，得到了研究人員所在大學研究倫理監察機構的批核，所有參與者均知情同意該填答。作為參與問卷調查的答謝，每位參與者會收到價值 100 港幣的禮券。

在樣本中，女性佔比為 55.41%。大多數參與者年齡介於 25 到 35 歲及 35 到 40 歲之間，大多數人月工資收入介於 30,000 到 39,999 港幣之間，超過一半人（52.55%）具有學士學位；大約三分之一答題者（27.45%）具有碩士學歷。在本調查的樣本中，就相關專業背景方面，來自紙質媒體的記者在樣本量中佔大多數（66.67%），來自數碼原生媒體從業者（10.2%）和廣播電視媒體從業者（8.23%）次之。本調查的樣本中，在媒體機構具有超過五年工齡的（31.76%）資深記者、具有一到三年工齡的（26.27%）記者，以及低於一年工齡的初級記者（28.62%）佔比大致相等。超過半數答卷者（53.53%）負責時政領域；而有 54.9% 答卷者為前線記者（相較於欄目副 / 主編、主編級別的人員）。

測量

測量包括新聞製作的不同方面，包括傳統與數碼媒介平台中：1）選題策劃；2）新聞生產領域消息來源；3）信息驗證與甄別；4）數據採集方式；5）新聞呈現方式中的信息與通訊技術；6）新聞製作後期如內容推廣和觀眾參與等各個方面。具體的測量問卷會在報告結果部分。此外，本項目還涉及到媒體從業人員與具有不同專業知識的從業人員進行跨學科合作的現狀。

研究結果與主要發現

1. 選題策劃方式仍以傳統的遵從編輯推薦、參考同行為主。數碼原生

生媒體更傾向於依賴網絡媒體尋找新聞故事

表 4.1 香港媒體從業者策劃構思新聞故事的選題方式使用情況

「在策劃構思新聞故事的選題時，您有幾經常使用以下的方式？（1＝幾乎不使用；5＝總是使用）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
編輯的推薦	3.45	0.88	3.77	0.65
其他媒體機構	3.40	0.84	3.58	0.90
論壇，BBS（如香港高登）	2.78	0.93	3.08	1.13
內容社區和眾包（crowdfunding） 網址（如維基百科）	2.89	1.01	3.12	1.07
微博客（如 Twitter，新浪微博）	2.69	1.09	3.04	1.08
多媒體分享網站（如 YouTube， Flickr）	3.08	0.95	3.38	0.98
資訊訂閱及推送的網站或應用程式 （如 news feed）	2.85	1.07	2.88	1.28

新聞選題策劃主要依賴傳統的渠道，並輔以數碼渠道。互聯網的迅速發展，使得香港新聞業愈來愈多地使用網絡媒體。然而，就新聞故事的選題渠道而言，香港媒體仍然通過傳統方式進行選題策劃，例如遵循編輯自上而下的建議、參考其他媒體組織。具體而言，數碼媒體從業者更為頻繁地使用數碼渠道，如社交媒體網站、論壇和內容社區。

2. 尋找消息來源、甄別核實信息時，傳統方式仍為主流，數碼原生

媒體從業者的信息核實途徑略顯多元

表 4.2a 新聞來源的主要途徑

「在尋找新聞的消息來源時，您有幾經常使用以下的方式？（1＝幾乎不使用；5＝總是使用）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
面對面採訪 / 電話採訪 / 書面或 郵件採訪	4.02	1.02	4.16	0.94
記者會	3.56	1.13	3.56	1.08
公共關係或廣告機構	3.15	0.94	3.16	1.11
其他媒體機構	3.28	0.88	3.40	1.04
他人的博客（blog）	2.40	0.97	2.48	0.87
論壇，BBS（如香港高登）	2.56	0.99	2.52	1.08
內容社區和眾包（crowdfunding） 網址（如維基百科）	2.73	1.03	2.68	0.95
微博客（Twitter，新浪微博）	2.52	1.11	2.72	1.17
社交網站	3.26	0.99	3.32	1.03
多媒體分享網站（如 YouTube， Flickr）	2.96	1.08	3.08	1.08
資訊訂閱及推送的網站或應用程式 （如 news feed）	2.67	1.14	2.64	1.35

表 4.2b 核實新聞信息真實性的途徑

「在核實信息的真實性時，您有幾經常使用以下的方式？（1＝幾乎不使用；5＝總是使用）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
受訪者本人	4.29	0.93	4.24	0.83
其他同事	3.40	0.93	3.52	1.05
學術機構或非牟利組織公佈的數據	3.69	0.96	3.88	0.93
公共關係或廣告機構	3.09	1.11	3.08	1.15
其他媒體機構	3.40	0.90	3.40	1.08
政府官員	3.36	1.15	3.44	1.19
根據公開資料守則獲取的數據	2.69	1.17	2.80	1.29
自行進行數據調查（如派發問卷、進行實驗等）	2.18	1.04	2.60	1.08
他人的博客（blog）	2.21	1.05	2.28	1.10
論壇，BBS（如香港高登）	2.27	1.05	2.40	1.12
內容社區和眾包（crowdfunding）網址（如維基百科）	2.54	1.07	2.64	1.04
微博客（如 Twitter，新浪微博）	2.26	1.07	2.52	1.05
社交網站	2.75	1.16	2.80	1.12
多媒體分享網站（如 YouTube，Flickr）	2.58	1.13	2.60	1.19
資訊訂閱及推送的網站或應用程式（如 news feed）	2.38	1.13	2.40	1.44

擴大並甄別消息來源，以及多方尋求信息核實的渠道，是維護新聞專業主義的重要途徑之一。在數碼化時代，網上日漸增長的海量信息，以及使用社交媒體進行現場直播、分享新聞等在民眾間的普及，一方面新聞從業人員獲取信息的渠道大為增加，另一方面，對信息真偽的判別也變得更具挑戰性。

本研究發現，在尋找信息來源時，整體而言，傳統的採訪方式依然佔據主要地位，而數碼原生媒體更傾向於通過社交媒體尋找來源。在核實信息和交叉比對方面，傳統媒體從業者和數碼原生從業者彰顯差異：傳統媒體更傾向於使用線下的方法，如向受訪者本人進行消息的核實、或尋求公關或者廣告機構，而數碼原生媒體更傾向於使用不同渠道的數據、資料以及社交媒體上的信息。與傳統媒體從業者相比，數碼原生媒體從業者信息核實途徑相對多元。

3. 權威機構公佈數據仍為數據資料的主要來源

表 4.3 數據資料收集方式

「在新聞報道的過程中，您有幾經常使用以下的數據或數據集？（1＝幾乎不使用，5＝總是使用）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
政府部門或大學發佈的公開數據或公開記錄	3.58	0.98	3.58	1.06
根據公開資料守則獲取的數據	2.66	1.08	2.58	1.10
自己進行第一手調查（如發放問卷、進行實驗等）	2.60	1.16	2.83	1.13
商業機構或行業提供的數據	3.12	1.05	2.91	1.04

（續上表）

洩密數據（如：維基解密）	2.32	0.99	2.38	1.01
您所在媒體機構收集整理的數據	3.11	1.09	3.30	1.22
利用應用程序界面（API）或其他工具抓取（Scraping）網上數據	2.12	1.05	2.52	1.08

在尋找數據資料時，不同媒介機構的從業者均表示，權威機構（如政府、學術機構）公佈的數據是最為常用的數據來源，傳統媒體更依賴於使用現存及其他機構已提供的數據，數碼原生媒體則更傾向於自行收集數據，包括進行一手的問卷調查，通過電腦程式自動抓取數據。

4. 大部分受訪者曾在新聞故事呈現手段中加入數據及視頻元素，尤其非常規的視頻產製方式，如無人機報道、360 相機及視頻直播

表 4.4a 新聞故事的呈現手段

「在您的日常新聞報道工作中，是否曾經使用過以下的技術？（多選，【1= 是，0= 否】，數值為該選項選擇【是】的百分比）」

	傳統媒體 (n = 229)	數碼原生媒體 (n = 26)
數據新聞	51.97%	69.23%
擴增實境 / 虛擬現實（AR/VR）	6.11%	7.69%
無人機報道	23.58%	26.92%
360 度相機 / Gopro 等拍攝工具	26.64%	19.23%
遠程感應 / 衛星圖像	6.99%	11.54%
語音識別	11.79%	15.38%
現場直播	44.54%	57.69%

大多數受訪者表示會在新聞故事的呈現中，加入數據元素和視頻元素。大多數新聞機構都涉及數據新聞，而大約一半受訪者表示他們使用過視頻直播，以及較為先進的非傳統視頻技術，如無人機報道和特殊類型的攝像器材。這展示了香港視頻新聞的較為領先的發展程度。另一方面，傳感器、遙感和衛星圖像以及語音識別這類技術則運用較少。

表 4.4b 視頻生產工具及直播平台

「您使用什麼電腦軟件或手機程式去攝像（包括拍攝及後期編輯）或進行直播？（多選【1= 是，0= 否】，數值為該選項選擇【是】的百分比）」

	傳統媒體 (n = 229)	數碼原生媒體 (n = 26)
iMovie	20.52%	11.54%
WireCast	4.80%	7.69%
Facebook 手機程式	51.53%	26.92%
YouTube 手機程式	19.21%	7.69%
Final Cut	15.28%	23.08%
Adobe Premiere	36.24%	61.54%

Facebook 是香港普通民眾常使用的社交平台。受訪者也表示開設以 Facebook 為主的官方賬戶，其手機程式是最主要的直播工具。

5. Facebook 是主要的與讀者互動的平台，社交媒體也成為傳媒從業人員擴寬人際網絡的主要渠道

表 4.5a 與讀者互動的平台

「您使用以下哪些平台來使讀者 / 用戶參與事件？（多選【1= 是，0= 否】，數值為該選項選擇【是】的百分比）」

	傳統媒體 (n = 229)	數碼原生媒體 (n = 26)
您所在媒體自行開發的網站或應用程式 (Apps)	48.03%	61.54%
Facebook 群組	74.24%	65.38%
郵件群組	6.99%	11.54%

表 4.5b 社交媒體與讀者互動的方式

「新聞報道正式發佈之後，您有幾經常使用社交媒體進行以下行為？（1 = 幾乎不使用，5 = 總是使用）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
在社交媒體上對與您工作有關的評論作出回應	2.64	1.14	2.81	1.20
在您工作範圍內，使用社交媒體去拓展人脈	3.00	1.11	3.50	0.91
在社交媒體上，對他人的界面或簡介作出評論	2.63	1.10	2.92	1.09
在社交媒體上提及與您工作有關的人	2.57	1.07	2.92	1.20

以上結果表明，Facebook 這一社交媒體在香港新聞機構中扮演重要的

與讀者互動的角色。數碼原生媒體比傳統媒體更經常地使用自行開發的網站或程式與讀者進行互動，而傳統媒體則更經常地使用已有的 Facebook 群組與讀者進行互動。郵件群組則並不是一種本港媒體常用的與讀者互動的平台。

同時，社交媒體是重要的拓展人脈工具，以及在社交媒體上對與工作相關的評論做出回應。另外，數碼原生媒體中的受訪者比來自傳統媒體的受訪者更經常地在新聞工作中使用社交媒體。

6. 在數碼媒體轉型以及跨學科融合上，香港媒體機構仍亟待加強

本報告發現，在數碼媒體轉型以及跨學科融合上，香港媒體機構仍亟待加強。不到三成（26.19%）受訪者表示，其所在的新聞機構曾針對數據科學技術（如數據新聞 data journalism、數據挖掘 data mining、數據可視化 data visualization 等）提供正式的訓練或舉辦相關活動（如工作坊、研討會）。另外，不到三成（28.17%）受訪者表示，自己曾參加過（或正在參加）針對數據科學技術（如數據新聞、數據挖掘、數據可視化等）的培訓活動（如參加工作坊、研討會、自修課程、攻讀相關學位等）。

同時，本報告詢問了受訪者對以下數據科學工具了解程度的自我評估。結果如下：

表 4.6 對數據科學工具了解程度的自我評估

「您認為，您對以下的工具有幾多了解？（1 = 完全不了解，5 = 非常了解）」

	傳統媒體 (n = 229)		數碼原生媒體 (n = 26)	
	平均數	標準差	平均數	標準差
數據分析工具（包括編程語言）				
• Excel	3.44	0.87	3.58	0.95
• Python	1.69	0.94	1.68	0.90
• R	1.58	0.86	1.58	0.88
網頁 / 前端語言				
• HTML/CSS/JavaScript	2.47	1.09	2.09	0.90
數據存儲與管理工具				
• 雲計算（Cloud computing）	2.16	1.13	1.84	1.14
• 數據庫（如 SQL, MongoDB）	2.00	1.12	1.68	0.95
數據分析與可視化工具				
• Tableau	1.66	0.87	1.76	1.09
• Open Refine	1.51	0.76	1.56	0.96
• ScrapingHug.com	1.52	0.76	1.58	0.95
• Infogram/ Canva/ Datawrapper/ Carto	1.79	1.05	2.23	1.31
代碼分享、協作平台				
• GitHub	1.71	0.94	1.85	1.08

結果顯示，受訪者對 Excel 和網頁設計的相關語言相對了解。然而，大多數較為高級數據分析和可視化工具，例如 Python 語言、數據庫，以及一些現成的數據清洗和可視化的工具，如 Canvas、Open Refine，以及代碼分享平台如 GitHub，都不被了解。

表 4.7a 程序員在新聞工作團隊中的角色

「在您所在的媒體機構或您的團隊中，程序員（coders / programmers）在新聞生產中擔當着什麼角色？」（多選【1 = 是，0 = 否】，數值為該選項選擇【是】的百分比）

	傳統媒體 (n = 229)	數碼原生媒體 (n = 26)
能主動發起新的報道項目	8.30%	15.38%
在報道項目早期參與項目	12.22%	26.92%
在報道項目後期參與項目	17.90%	38.46%
只有在有需要時提供協助	43.67%	61.54%

表 4.7b 設計師在新聞工作團隊中的角色

「在您所在的媒體機構或您的團隊中，設計師（designers）在新聞生產中擔當着什麼角色？」（多選【1= 是，0= 否】，數值為該選項選擇【是】的百分比）

	傳統媒體 (n = 229)	數碼原生媒體 (n = 26)
能主動發起新的報道項目	6.99%	11.54%
在報道項目早期參與項目	18.34%	38.46%
在報道項目後期參與項目	54.59%	76.92%
只有在有需要時提供協助	34.06%	50%

目前國際主流媒體數碼化媒體轉型中兩類新興的從業者：程序員和設計師，在新聞機構中依然扮演邊緣的角色。能有主動發起新的報道項目的設計師和程序員均不足一成。

觀察結論及討論

總而言之，上述結果探討了大數據和數碼化轉型時代的背景下，新聞編輯室正在討論和辯論的三個最重要的問題：

- 問題一：媒體從業人員如何在數碼時代處理和驗證大量信息？
- 問題二：媒體從業人員如何用數碼媒體技術展示故事？
- 問題三：媒體從業人員是否為數碼化轉型做好了充分的準備？

觀察結論和詳細說明如下。

1. 選題策劃方式仍以傳統的編輯推薦、參考同行為主。數碼原生媒體更傾向於依賴網絡媒體尋找新聞故事。

2. 尋找消息來源、甄別核實信息時，傳統方式仍為主流，數碼原生媒體從業者的信息核實途徑略顯多元。

3. 權威機構公佈數據仍為新聞數據資料收集主要來源。

選題策劃與消息渠道的選擇和甄別，對於新聞生產過程十分重要。調查結果顯示，媒體機構內的編輯部在守門程序中扮演重要角色，香港的媒體機構主要依靠自上而下的模式選擇和確定新聞故事。此外，媒體機構還會參考其他媒體機構的做法。以上結果表明，傳統媒體機構中的職業分工在數碼時代依然存在。

另一方面，香港具有高度發達的媒體和通信行業，不乏廣告公關機構和商業信息提供商，同時香港的政府官員和學術機構也定期公佈開放數據，這些都使記者能夠較為便利地獲取數據和資訊。但是，本次調研的樣本顯

示，媒體專業人員有限的數據科學技能阻礙了其使用先進的信息平台及較為複雜的程式語言從網上採集數據，並用相關的數據工具與技術處理數據。即使是數碼原生媒體，其從業者在數據科學技能的普及上仍顯保守。

4. 數據新聞和視頻新聞是主要的新聞故事呈現手段，尤其無人機報道、360 相機及視頻直播。

調查結果表明，多數媒體機構都專注於新聞內容的視覺呈現，其中部分媒體會使用無人機、360 度攝像機或 Gopro 呈現新聞，並進行新聞現場實時視頻的播報。

同時，數據驅動的新聞也成為一種講述新聞故事的新方法。但是，相關從業者關於數據科學的知識依然有限。

5. Facebook 在香港媒體中扮演社交媒體推廣的主要角色。社交媒體也成為傳媒從業人員擴寬人際網絡的主要渠道。

香港的媒體專業人士常會使用社交媒體平台宣傳內容並與觀眾互動。其中，Facebook 以其信息交互和多媒體功能便於溝通、宣傳與公共關係處理，在媒體中使用非常普遍。

6. 受訪者表示數據科學應用知識有限。只有不到三分之一的受訪者參加了數據科學研討會。程序員和設計師在新聞製作團隊中處於邊緣地位。

從本研究的受訪者回答來看，數據科學與媒體傳播之間的跨學科合作仍亟待加強。如之前回顧，國際上若干知名的傳統媒體都新創立了使用新數碼信息與傳播技術的團隊，比如 *The New York Times* 的 VR 團隊，

數據新聞 Upshot 團隊，Guardian 的 Guardian Interactive，Bloomberg 的 Bloomberg Graphics，Financial Times 的 FT Data，BBC 的 BBC News Lab 等。也有一些數碼原生媒體在嘗試用新技術進行新聞報道，如 BuzzFeed 和 Vice。然而，在香港，不同學科的從業人員聯繫較弱。其中可能原因之一是大多數媒體組織在大數據和人工智能時代缺乏明確可行的數碼化轉型藍圖。此外，以新興技術為基礎的媒體商業模式也尚未成熟，媒體仍顧盼傳統模式下的發展軌跡。

媒體機構應加強對其人員數據科學和相關技術的培訓。另一個可能的原因是數據和媒體傳播媒體教育的發展仍須加強。市場對跨學科人才的需求不斷增加。在不久的將來，預計在跨學科的領域，應有更多的教學和學術活動。

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● 第五章

香港媒體技術平台調查

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研究背景

信息技術對媒體環境的深刻改變已成為一個全球現象（Cornia, 2015）。如何在複雜環境中生存與發展，是所有媒體機構共同關心的重要議題。生產力是激烈競爭中立於不敗之地的重要保障（Ehikhamenor, 2002）；影響生產力的三大因素中，新技術是一支重要力量（Shay, 1991）。根據創新擴散理論，新技術從誕生到被廣泛應用，並不是一個均勻擴散的過程；不同的個體或組織透過不同的傳播渠道接收關於新技術的信息，並在不同程度和進度上接納和應用新技術，這個過程受到多種個體、群體和社會因素的影響（Rogers, 1995; Gigerenzer & Selten, 2001; Dearing, 2009 etc.）。Davis（1989）建立的技術接受模型（Technology Acceptance Model, TAM）則從應用者角度闡釋了新技術被接受過程中的兩大影響因素，即：使用者感知的技術有用程度和使用者感知的技術易用程度（Davis, 1989; Davis et.al., 1989; Matikiti et.al., 2018）。

在現今的媒體機構中，信息與傳播技術（ICTs）已滲透至各個方面，催生高度細分的業務和用戶市場，也對媒體機構提出了更高的要求。許多

媒體機構建立了數碼平台來經營與整合多種業務，包括內容分發、內容呈現、互動增長與內容變現；但隨着新技術快速換代升級，各機構在技術應用方面的差距也愈加明顯：有些機構亦步亦趨，緊跟潮流；有些機構保守審慎，駐足觀望。不同的選擇背後，不但有媒介機構根據歷史、自身實力、目標市場、受眾特性所作出的綜合判斷，也受外部媒介體系影響頗深，在世界不同地區呈現不同的特點（Cornia, 2015）。

本項目聚焦香港，一個媒體環境非常獨特的地區。首先，香港市場規模較小，媒體卻高度發達，機構眾多，市場高度細分，競爭之激烈程度在全球都較為少見；其次，特殊的歷史地理環境使香港資訊極為豐富與多元化，尤其是互聯網普及之後，受眾可輕易接受來自全球的信息，進一步加劇了競爭的白熱化程度；第三，昂貴的租金、人力等成本不但提高了媒體機構的准入門檻，也在強力擠壓他們的利潤空間。對於多數香港媒體機構來說，生存大於發展，應用新技術與其說是一種選擇，不如說是迫切需求；但無論傳統媒體還是原生數碼媒體，在如何應用新技術上，徘徊與迷茫是普遍狀態。

香港傳統媒體擁有悠久的歷史，是中國第一份報紙誕生的地方。由於香港資訊發達、新聞自由、行業發展充分，傳媒行業在全球都處於領先地位。自 1994 年互聯網出現之後，眾多傳統媒介開始在網絡上發佈內容，並逐漸成為一個不可或缺的渠道；同時，以網絡、流動平台為首發平台，以數碼內容為主要業務的原生數碼媒體也隨之誕生。自 2010 年起，隨着通訊技術發展，4G 高速流動網絡廣泛普及，原生數碼媒體呈爆炸式增長，從內容到形式都趨於多樣化；而擁有數碼平台的傳統媒體則增長緩慢、趨於飽和。2016 年，原生數碼媒體數量超越傳統媒體旗下的數碼平台數量，並持續快速增長（表 5.1）。

表 5.1

年份 / 數量	傳統媒體	原生數碼媒體
1994	1	0
1995	5	0
1996	11	0
1997	14	0
1998	15	1
1999	17	1
2000	21	2
2001	22	2
2002	23	4
2003	24	4
2004	25	5
2005	28	6
2006	29	8
2007	30	9
2008	30	10
2009	31	10
2010	31	11
2011	33	13
2012	35	17
2013	35	23
2014	35	28
2015	35	36
2016	37	43
2017	37	46
2018	37	47

傳統媒體與原生數碼媒體之競爭，在香港尤為激烈。從外部環境來看，一方面，香港傳統媒體高度發達，歷經多年對社會的強力滲透和受眾培育，具有非常堅實的基礎；另一方面，香港也是較早普及互聯網的地區之一，網絡基礎建設堅實，高速流動網絡滲透率高，社交媒體普及度高，給了原生數碼媒體充足的發展空間。從內部實力來說，傳統媒體歷經多年發展和沉澱，具有雄厚的資金和豐富的資源；原生數碼媒體資歷尚淺，爆發式增長過後，有多少能挺過大浪淘沙的競爭篩選尚不得而知。兩種媒體形式的共同發展，加劇了受眾分化，給香港媒介體系的未來帶來更多不確定性。

本項目旨在以比較的眼光，探尋香港媒介機構如何應用信息與傳播技術（ICTs）來運營其數碼平台。具體而言，我們將探討媒介機構如何在數碼平台上應用分發技術、呈現技術、互動技術與變現技術，尤其關注傳統媒體和原生數碼媒體的異同，並以此為基礎，探討媒體數碼平台未來發展的方向。

研究問題

本部分關注香港本土媒體機構在各類數碼平台上新媒體技術的應用情況，着重對比了擁有數碼平台的傳統媒體和原生數碼媒體在此問題上的差異。我們從分發技術、呈現技術、互動技術與變現技術四個方面出發，探討以下三個問題：

問題一：香港本土媒體機構應用了哪些新媒體技術來開發和維護其數碼平台？

問題二：香港本土媒體機構在其數碼平台上應用了哪些新媒體技術來促進市場增長？

問題三：在以上兩個項目中，傳統媒體和原生數碼媒體平台的新媒體技術應用情況是否存在差異？

研究方法

數據收集與分析

本研究主要使用內容分析法，分析單位為在香港創立的媒體機構，篩選標準如下：一、具備一手信息採集能力；二、具備至少一種自有數碼平台，同時使用至少一種第三方新媒體渠道。自有數碼平台包括網站、App（流動應用）、STB（機頂盒）。第三方平台包括 Email（電子郵件）、社交網絡（例如 Facebook）、UGC 視頻分享服務（例如 Youtube / Vimeo）、UGC 音頻分享服務（例如 Apple Podcast）。三、面對全港公眾，內容具備新聞屬性；四、2018 年 7 月後有更新。

通過以上標準篩選後，研究一共覆蓋了 87 家媒體，其中包括 40 家使用數碼平台的傳統媒體與 47 家原生數碼媒體。前者指的是以在信息時代之前即存在的媒介形式為主要業務和首發平台的新聞媒體；¹ 後者的定義為以網絡平台、移動端平台作為首發產品，並以數碼平台 / 第三方平台作為主要內容發佈途徑的新聞媒體。完整篩選標準、定義、包括和排除列表，詳見本章附錄：包含和排除標準。

數據收集主要使用兩種方法，一種是人工收集，另一種是基於媒體網站的前端代碼，利用 JavaScript 瀏覽器語言自動化內容收集操作。所有數

¹ 因本報告主題為新媒體發展趨勢，故只有傳統媒體業務而未發展數碼平台的媒體機構未被包含在內。

據均收集自媒體的官方網站、社交媒體主頁和 Google 搜索頁面。數據編碼由人工完成，分為兩個階段：第一階段由六位編碼員分成三組對全部數據進行編碼；第二階段再由第七位編碼員進行檢查核對，以保證信度。編碼對象都是客觀內容，不適用信度測量；我們從 87 家媒體、216 個研究問題、共 18,792 個編碼對象中隨機抽取了 100 個進行檢查，未發現錯誤項目。數據分析使用 Python 代碼實現，可視化使用阿里螞蟻金服可視化庫 AntV 的 G2 實現。

該項研究數據收集與編碼階段同時進行，發起於 2018 年 7 月 5 日，截止於 2018 年 9 月 11 日，為期兩個月；數據分析階段發起於 2018 年 9 月 1 日，截止於 2018 年 9 月 15 日，為期半個月，總共耗時兩個半月。

測量變項

所收集和分析的數據主要包括四個維度：分發技術、呈現技術、增長技術和變現技術。

結果概要

一、分發技術

1. 媒體自有平台以網站為主，流動應用次之

網站是香港媒體最常使用的平台，在傳統媒體和原生數碼媒體中，普及率均達到 100%（表 5.2）。位居第二的是流動應用，總體普及率達 64.37%。總體而言，仍有四成媒體保留印刷介質；使用電子報、電子簡訊的媒體分別佔 35.63%、24.14%。以電視頻道、機頂盒或廣播為平台的媒體不足一成，分別為 6.90%、5.75%、3.45%。

表 5.2

平台	使用率
網站	100.00%
流動應用	64.37%
印刷媒體	40.23%
e-paper	35.63%
e-newsletter	24.14%
電視頻道	6.90%
機頂盒	5.75%
電台	3.45%

根據技術應用模型（TAM），使用者對新技術易用性的感知，是他們應用該技術的重要因素之一。對媒體機構來說，自有網站技術成熟，准入門檻低，成本可控，易於維護和打理，是屬於較為「易用」的技術；根據第三章中的訪談內容，一些媒體機構負責人也承認，紙質內容毋需作出改動便可放上網，對他們來說非常方便。也有人對此提出批評，認為這樣的網站只是電子化的紙媒，並不能算是真正的數碼平台；但網站 100% 被使用的絕對優勢是毋庸置疑的。

與網站相比，僅有 64.37% 的媒體機構使用流動應用作為自有平台。流動應用需要更多的資金和技術力量進行開發和維護，對機構來說，並不是首選的「易用」渠道；但智能手機在香港的高度普及，意味着流動應用背後巨大的收益潛力，在自有平台中佔據第二位的使用率。

雖然數碼平台勢頭正猛，但傳統媒體形式仍佔據一席之地；尤其是印刷媒體，使用率仍達到四成左右，這與香港用戶的媒介使用習慣密不可分。第二章的調查顯示，在全球報紙銷量普遍下滑的形勢下，仍然有 40.56%

的香港市民使用印刷版報紙獲取信息。在此項上，傳統媒體和原生數碼媒體呈現了嚴重分化，體現為傳統媒體有 75% 使用印刷介質，而原生數碼媒體僅有 10.64%。有趣的是，e-paper 作為一種基於數碼介質的媒介形態，其使用率卻呈現與印刷介質非常類似的分佈：傳統媒體 70%，原生數碼媒體 6.38%（見後文）。大多數 e-paper 的內容、排版都與紙媒相同，對擁有印刷媒體的媒體機構來說，製作 e-paper 的邊際成本非常低，它也因此成為大多數傳統媒體機構的選擇。

第二章中的調查發現，有高達 70% 保留超八成的香港市民使用電視獲取資訊，但僅有不足 10% 的媒體使用電視作為平台，或因准入門檻較高。

2. 鏈接的第三方平台以社交媒體為主，Facebook 以壓倒性優勢穩坐第一

香港媒體不但使用自有平台，還常與第三方平台鏈（表 5.3）接，Facebook 是最受歡迎的第三方平台，鏈接率達到 85%；排名第二的 Twitter 和 YouTube 則遜色很多，鏈接率僅在三成左右。RSS 和 Instagram 也有一定鏈接，分別為 21.84% 和 16.09%。另有部分媒體鏈接 Google+、LinkedIn、Tumblr 等西方平台。分別有 11.49% 和 6.90% 的媒體鏈接了 Weibo 和 Wechat，分別排第 7、第 9 位。

香港媒體的主頁，平均鏈接第三方平台數量為 2.26 個，以西方社交媒體為主。考慮到香港媒體實際設立帳號的第三方平台數量更多，這一數字反映出媒體在鏈接呈現方面有高度的選擇性。新興媒體通常會鏈接更多的第三方平台，以盡可能擴大流量獲取的入口。其中，HKFP 鏈接多達 10 個第三方平台。

表 5.3

平台	鏈接率
Facebook	85.06%
Twitter	32.18%
YouTube	29.89%
RSS	21.84%
Instagram	16.09%
Google+	12.64%
微博	11.49%
Linkedin	9.20%
微信	6.90%
Tumblr	2.30%

除鏈接外，我們所調研的媒體全部開設了 Facebook 主頁，將 Facebook 作為最主要用戶運營渠道。Facebook 在香港媒體生態中的壟斷特性，一方面說明香港媒體加強 Facebook 的運營是行之有效的策略，讓優質內容可以傳播到更廣闊的受眾；另一方面，也反映出了嚴重的平台依賴性。媒體與平台的博弈，是一個由來已久的問題；背後不僅是商業利益的爭奪，也是對話語權的爭奪。在社交媒體逐漸成為主流的過程中，傳統媒體先是喪失了內容分發的優勢，進而又喪失了議程設置的優勢；許多媒體機構已經意識到自身對社交平台的依賴，他們一方面想努力擺脫，另一方面又無法與主流趨勢抗衡。這不僅僅是香港的問題，更是一個全球現象（Nielsen, 2012）。

在這個博弈的過程中，專業的新聞媒體表現出兩級分化。比如在 2016 – 2017 年，Facebook 大力推廣 Instant Article 技術，希望將內容直

接承載於 Facebook 的生態系統之內，不再依賴媒體自有的網站或者流動應用。有一部分媒體選擇迎合，以獲取流量上的優勢；另一部分媒體選擇反擊，以保持獨立的身份屬性。在 Facebook 被假新聞和隱私數據泄漏等負面消息纏身的今天，這一依賴性更值得媒體從業人員思考，作出合理對策。

3. 總體而言，傳統媒體在數碼平台的經營上超越原生數碼媒體

傳統媒體在流動應用開發與搜索引擎優化²兩項上，表現優於原生數碼媒體；其他項目基本持平。

在流動應用開發上（表 5.4），傳統媒體與原生數碼媒體對平台的側重點有所不同，具體體現為在傳統媒體中，iOS 平台的使用率（77.50%）高過 Android 平台（67.50）；而在原生數碼媒體中，二者持平（均為 46.81%）。總體而言，傳統媒體的流動應用開發比例高於原生數碼媒體。同時印刷紙媒、數碼版紙媒在傳統媒體中也得到大量使用，而在原生數碼媒體中使用率很低。

2 搜尋引擎優化（英語：search engine optimization，縮寫為 SEO），是一種透過適應搜尋引擎的運作規則來對網站進行優化，並提高網站在搜索結果各項指標上的排名的方式。

表 5.4

平台 / 使用率	傳統媒體	原生數碼媒體
網站	100.00%	100.00%
Facebook	100.00%	100.00%
iOS	77.50%	46.81%
Print	75.00%	10.64%
e-Paper	70.00%	6.38%
Android	67.50%	46.81%
YouTube	67.50%	87.23%
Twitter	57.50%	53.19%
Instagram	27.50%	36.17%

在搜索引擎優化方面（表 5.5），傳統媒體在網頁鏈接（Sitelinks）的展現上，比例明顯高於原生數碼媒體，分別為 80.00% 和 53.19%；另外兩項指標上（和搜索摘要），傳統媒體和原生數碼媒體差別不大。其一，在 Google 搜索結果中，傳統媒體和原生數碼媒體在首條顯示的比例分別為 89.36% 和 85%；其二，傳統媒體和原生數碼媒體在搜索摘要（Optimized Excerpt）中出現的比例皆佔四成上下。

表 5.5

指標 / 比例	總體	原生數碼媒體	傳統媒體
首條搜索結果	87.36%	89.36%	85.00%
搜索摘要	41.38%	42.55%	40.00%
網站鏈接	65.52%	53.19%	80.00%

從數據上來說，傳統媒體在數碼平台運營上有較好表現；但我們應對此審慎解讀。數碼平台運營與優化不僅是媒體機構選擇的結果，還受到資金、資源、人才、設備等綜合實力的制約。無論如何，這個結果某種程度上來說打破了「船大難調頭」的常規認知，也啟發我們思考：香港傳統媒體悠久的歷史和龐大的規模，究竟是它們向新媒體轉型路上的助推器，還是絆腳石？原生數碼媒體是否能夠在新媒體時代後發制人，佔據先機？

二、呈現技術

1. 香港媒體數碼平台的前端³ 技術較為陳舊

香港媒體在網頁前端技術上總體並未跟上發展的步伐，在單頁網頁應用、加載優化、屏幕自適應方面的新技術採用率較低，影響用戶在不同設備和網絡條件下的閱讀體驗，媒體的引流和搜索優化也有很大的提升空間。使用 Wappalyzer 對各媒體的技術棧進行統計（表 5.6），77% 仍採用 jQuery（2006 發佈）作為媒體網站的前端框架，只有少數（9%）媒體使用了較新的技術，如 Angular、React、Vue。網頁渲染方面，逾九成網頁仍然使用 Web1.0 時代的服務器渲染，只有不到三成的網頁對圖片懶加載進行優化。

3 前端：軟體系統中直接和用戶交互的部分，如網頁前台和 app 界面等。

表 5.6

排名	前端技術	比例
1	jQuery	77.01%
2	jQuery Migrate	25.29%
3	jQuery UI	20.69%
4	Modernizr	17.24%
5	prettyPhoto	8.05%
6	Fancybox	6.90%
7	Moment.js	4.60%
8	Zepto	2.30%
9	Fingerprint.js	2.30%
10	Lightbox	2%

在全球範圍內，緊跟潮流、不斷更新前端框架是大勢所趨。一方面，開源社區蓬勃發展，開發和設計的工具鏈變得齊全，「全棧開發」的盛行使機構能以更高的效率整合多種技術，採用新技術的顯性成本理論上愈來愈低；另一方面，更新前端框架不但能提升用戶體驗，還有利於媒介機構生產效率的提高，降低開發和維護成本，具有很大的收益潛力。在這種大背景下，香港媒體機構整體的技術落後是一個值得深思的現象。

從媒體機構本身來講，根據第二章的訪談和第四章的調研，媒體機構對應用新技術帶來的收益普遍信心不足，對資金風險有較高的認知；不少媒體負責人提到新技術應用會帶來隱形成本，如工作流程需改變、人員認知需提升等；技術人員在媒體機構中也多處於邊緣化地位，在機構相關決策中未掌握優勢話語權。

從社會背景來說，媒體機構的技術應用程度與整個社會的信息科技環

境息息相關。例如，美國是全球信息科技人才中心，儲備充足，各行各業都有科技人才進入；社會對科技的認可和尊重程度高，組織對科技帶來的收益普遍有較為充分的認知。與之相比，香港各行各業都存在科技人才短缺的現象；整個社會對新技術的應用前景認知不夠充分，科技人才未得到應有的重視，邊緣化現象較為普遍。如何加強新技術的滲透力度，在全球競爭中佔據先機，是整個香港所面臨的嚴峻挑戰，而不僅僅限於媒體行業。

2. 新的內容呈現方式並未得到有效應用，但視頻直播發展居世界前列

得益於香港高度發達的互聯網基礎設施以及高速 4G 網絡的普及，87.36% 的媒體都支持視頻內容（表 5.7），超過一半的媒體支持視頻直播，處於世界領先地位。不過，與國際前沿趨勢相比，音頻內容、交互內容、數據圖表與信息圖表等呈現方式，在香港媒體中尚未得到有效應用。僅 10% 的媒體提供音頻內容，20% 提供交互內容，40% 提供數據圖表與信息圖表。

表 5.7

內容 / 媒體	傳統媒體	原生數碼媒體	總體
儲存 / 上傳的視頻	85.00	76.60	80.46
直播視頻	47.50	55.32	51.72
圖表 / 信息圖	35.00	44.68	40.23
音頻	10.00	10.64	10.34
互動內容	10.00	19.15	14.94

香港在互聯網基礎設施上一直處於全球領先地位，這個優勢有效地體現在高度普及的視頻內容上。根據國際電信聯合會發佈的一份報告（ITU, 2017），香港的信息與傳播技術發展指數（ICT Development Index）位列全球第六，超過美國、日本，這是香港媒體得天獨厚的優勢。不過，隨着帶寬的進一步加大，AR、VR 在內容呈現中的應用與普及指日可待。它們是否會取代視頻，成為下一代內容領域的王者，還需時間去檢驗；這也是屆時香港在全球角逐中能否依舊保持領先地位的風向標。

除視頻外，近幾年，數據新聞成了國際上炙手可熱的內容形式。過去，媒介機構更多援引數據來補充說明或側面佐證新聞報道中的事實或觀點；現在，數據逐漸成為內容中的主角，主要通過信息圖、數據圖等可視化形式來呈現。愈來愈多的國際新聞會議開設數據新聞獎項，多所高校開設數據新聞課程或專業。在香港，半數媒體機構使用了數據新聞作為內容呈現方式；香港大學、香港中文大學、香港城市大學、香港浸會大學等高校都開設了數據新聞課程和專業，未來將為此領域注入更多新鮮血液。

3. 內容陳列仍有紙媒時代的印記

在數碼平台的內容陳列上，傳統媒體網頁的主流排版仍然是類似報紙的柵格式，使用率達 65.00%（表 5.8）；網格式設計的使用率僅有 20%。原生數碼媒體中，網格式設計更加多見，達到 42%；但仍有 40.43% 採用柵格式排版。

從平台來看，大多數（79%）網站具備響應式設計，移動端以單列排版為主，桌面端有近半網頁使用三列排版。

表 5.8

排版方式 / 媒體	傳統媒體	原生數碼媒體	總體
嵌套式	65.00	40.43	51.72
規則網格	17.50	42.55	31.03
欄式	15.00	12.77	13.79
不規則網格	2.50	4.26	3.45

嵌套式排版是印刷媒體時代的產物，其最大特色是將內容劃分為大小不一、主次分明的區塊，每個區塊內使用不同的設計、嵌套不同的元素。在印刷媒體中，嵌套式排版有利於突出重點、劃分層次；但應用在數碼平台上，便顯得靈活性不足，視覺效果也更加複雜，需要額外處理後才能應用響應式設計。網格式排版則弱化了區塊概念，使用扁平化、模塊化、設計風格一致、可隨意組合的「格子」來劃分內容。網格式設計靈活、美觀，可以自動應用響應式設計，適合進行圖表展示，對數碼平台用戶十分友好。總體來說，網格式排版比柵格式排版更適合在數碼平台使用。

傳統媒體機構很多擁有印刷媒體，在網頁中有可能因慣性或為保持風格統一而選擇嵌套式排版；但在原生數碼媒體中，紙媒使用率僅有 10.64%，柵格式排版仍然達到 40.43%，這說明排版理念仍帶有紙媒時代的烙印。

三、互動技術

1. 用戶運營嚴重依賴社交媒體，互動渠道狹窄

如前文所述，香港媒體非常重視社交媒體平台，開設 Facebook 賬號的比例為 100%，官方網站與 Facebook 的鏈接率近九成。除社交媒體以外，

香港媒體的用戶互動渠道嚴重落後，停留在傳統渠道上。63.22% 的媒體網站擁有用戶評論功能（表 5.9）；與之相比，僅 5.75% 媒介擁有博客平台，不足一成；擁有論壇和線上聊天功能的媒體更是鳳毛麟角，都只有 3.45%。近年出現的新興技術如 chatbot（聊天機器人），在香港媒體中的普及率竟然為 0。此結果顯示，無論是傳統媒體還是原生數碼媒體，均嚴重缺乏用戶互動意識，運營管理遠遠落後於世界潮流。

表 5.9

排名	互動渠道	使用率
1	新聞評論區	63.22%
2	博客	5.75%
3	論壇	3.45%
4	在線聊天	3.45%
5	聊天機器人	0

在印刷時代，媒體機構與讀者互動的主要手段是信件。讀者來信主要分為兩類：第一類是對報紙上刊載的議題發表看法；第二類是參與公眾事件的辯論（Wahl-Jorgensen, 2007）。數碼時代來臨後，新聞評論區基本承載了這兩大功能，但區別在於：互聯網的匿名性與把關環節的確實讓評論的質量無法得到保證。Harlow（2015）針對美國報紙網站的研究發現，新聞評論區整體情緒較為負面，涉及種族的刻板印象也十分普遍。過去兩年，路透社、今日美國、大西洋月刊等媒體紛紛關閉評論區，將一部分用戶互動移植到社交媒體上進行；在自有平台上，轉而使用在線聊天、Chat bot 等新技術來進行用戶互動與維護。這些互動方法具有更強的雙向交流特質。

四、變現技術

1. 營收模式以廣告為主，傳統廣告形式仍佔主流

香港媒體的營收模式仍然以廣告為主，佔全部媒體的 81.61%。其中，靜態廣告、橫幅廣告與段落間廣告是主流廣告形式，分別佔 91.55%、66.20% 與 56.34%（表 5.10）。比較而言，嵌入式、互動式等新興廣告形式應用較少，分別佔 9.85% 和 5.63%。其他營收模式佔比較小，僅有 9 個媒體（10%）提供網上購物；22 個媒體提供付費內容（25.29%）。16 個媒體（18%）接受贊助。

表 5.10

廣告形式	比例
靜態廣告	91.55%
橫幅廣告	66.20%
段落間廣告	56.34%
全屏廣告	22.54%
懸浮廣告	18.31%
蓋屏廣告	15.49%
文章頁面全屏廣告	11.27%
嵌入式廣告	9.86%
互動廣告	5.63%

在訪談中，不少媒體機構主管都提到以廣告為核心的商業模式受到很大衝擊，已不像之前變現能力那麼強。一方面，這與全球經濟形勢密切相關；另一方面，信息時代的用戶擁有更多選擇。媒體機構在積極探索更多可行的商業模式，如電子商務、用戶付費等。不過，當下廣告依然是大多數媒體內容變現的主要方法。

2. 付費管道有多樣化趨勢，但傳統管道仍未退場

香港媒體的付費渠道呈現出多樣化趨勢。逾六成原生數碼媒體支持付費，較傳統媒體（五成）為多；但傳統媒體平台的付費渠道更多。總體付費方式以信用卡和 PayPal 為主；一些新興支付方式也被部分媒體採用，如微信支付、支付寶支付。此外，仍有 34% 的媒體以表格加支票方式付費（表 5.11）。

表 5.11

付費方式	比例
信用卡	52.00%
PayPal	50.00%
存款卡	38.00%
表格與支票	34.00%
支付寶	6.00%
Stripe	2.00%
微信支付	2.00%

在線支付和移動支付在國際上已成為大勢所趨，在香港卻一直滲透緩慢。香港生產力促進局 2018 年 7 月發佈的《AlipayHK 智慧支付普及指數》中稱，現金與八達通仍是香港市民最常用的支付方式，滲透率接近 100%；隨後是信用卡、EPS、非接觸智能卡。流動支付及在線支付的滲透率分別僅有 20% 和 13%。媒體內容付費大多不是當面交易而是遠程付費，香港電子支付相對較低的普及率，勢必會引發支付操作繁瑣、耗時長、效率低的問題，一定程度上限制了電子商務、付費內容等新型商業模式的發展。

由於電子支付監管嚴格，再加上消費者對隱私洩露的擔憂，香港電子支付走過不少彎路。2018 年 9 月，金融管理局推出在線支付系統「轉數快」，該系統支援雙幣跨行即時轉帳服務，可在電腦和流動平台上使用。香港是否會借此彎道超車？支付手段的升級，是否對媒體付費的趨勢產生促進作用？這些問題，都需要時間去檢驗。

觀察結論

總體而言，香港媒體一定程度上採用了新技術來進行新聞分發、呈現、增長和變現；但在很多方面，與國際潮流尚有距離，有較大的發展空間。傳統媒體與原生數碼媒體在各項表現各有優劣，傳統媒體在一些項目上表現甚至超越原生數碼媒體。

首先，在新聞分發技術上，香港媒體發展較為成熟。網站、流動應用與社交媒體主頁都有較高普及率。相比較而言，傳統媒體在預算上更為充足，使用流動平台的更多。原生數碼媒體可以嘗試引入開源、免費的技術，通過外包等方法，觸及更多的潛在媒體平台。在搜索引擎優化方面，傳統媒體亦有較好表現。原生數碼媒體應該在搜索引擎方面加以優化，沉澱優質內容。Facebook 是香港媒體不可忽視的重要傳播渠道，在用戶中亦具有強大影響，應加大投入，加強主動傳播。

其次，在新聞呈現技術上，香港媒體較國際潮流略顯落後。無論是傳統媒體還是原生數碼媒體，大多保留了較為陳舊的前端技術，新技術的應用較為不足；內容呈現方面，音頻、交互、圖表等國際前沿技術未得到有效應用；排版方式上也具有紙媒時代的深刻烙印，對手機、平板等流動終

端更友好的排版方式未得到廣泛應用。但是，香港媒體在視頻直播上表現突出，發展程度處於世界先進水平。未來發展應保持在視頻和直播方面的投入，同時加大音頻、交互、圖表內容的投入，擁抱前沿科技，方能緊跟國際潮流。

第三，在互動技術方面，香港媒體思維嚴重落後。用於實現用戶互動的網頁功能發展不足，主要的手段還是評論功能，提供博客、論壇、在線聊天等功能的媒體較少，對國際前沿互動技術的應用接近於無。媒體雖積極運營自己的社交媒體官方賬號，但很少在社交網絡上與用戶直接互動。

第四，在變現技術方面，廣告仍是香港媒體的主流營收方式，且以較傳統的廣告形式為主，在線購物式微。訂閱模式的比例雖有擴大，但部分媒體付費模式老舊，缺乏便捷性和即時性。未來可增加在線支付和移動支付，以增進訂閱模式的轉化。

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附錄：包含和排除的標準

本研究覆蓋在香港創立、具備一手信息採集能力、具備至少一種自有數碼平台、同時使用至少一種第三方新媒體渠道的媒體機構。自有數碼平台包括網站、App（流動應用）、STB（機頂盒）。第三方平台包括 Email（電子郵件）、社交網絡（e.g. Facebook）、UGC 視頻分享服務（e.g. Youtube / Vimeo）、UGC 音頻分享服務（e.g. Apple Podcast）。所研究的媒體面對全港公眾，內容具備新聞屬性。2018 年 7 月後有更新。

包括的媒體舉例：

- 1. 端傳媒：原生網媒，總部位於香港，採編團隊位於兩岸三地，自有網站、App，同時設置有 Facebook 專頁
- 2. 香港 01
- 3. FactWire：原生 NGO 網媒，以調查為主，自有採編團隊，自有網站，同時設置 FB 專頁
- 4. 100 毛：星期三港案，深度報道短視頻，具備採編能力

不包括的舉例：

- 1. 將軍報：由香港新民主同盟發起，只開設了 Facebook 專頁
- 2. 美新報：只有報紙
- 3. 星島地區報：只有網站
- 4. 彭博商業週刊：只是從母公司 license 內容，獨立運營；大多數內容是翻譯自母公司
- 5. 100% 政黨屬性：例如由某一政黨出資；例如只發佈某一政黨的內
容

6. 向上合併（不拆分）：編採立場一致，主要媒體的垂直分欄，如科技、飲食、潮流、財經、文化專頁 - ezone，iMoney，PCM，JET

同一個公司 / 集團的多個子品牌 / 子站點是否拆分研究：

● 拆分：

○ 如採編團隊分離，則絕對拆分。

■ e.g. 壹週刊、蘋果日報

○ 核心是考慮主觀意願是否在建立獨立平台 / 品牌：

■ e.g. 點新聞，屬於文匯，但網站嘗試不顯示這點。

● 中間：

○ Inkstone，屬於 SCMP 集團，定位為給美國人看的中國新聞，與 SCMP 主站內容不互換使用。

● 不拆分：

○ 內容高度交叉，如中英互譯，選編、選集。

■ e.g. 信報系列：<http://www2.hkej.com/landing/index>，<http://www.ejinsight.com/about-eji/>，<http://startupbeat.hkej.com/>

○ 副刊：

■ 果籽（蘋果日報副刊）

■ 飲食男女（事實上的副刊性質）

○ Sub-channel:

■ WONDER - 定位不同，以視頻為主，（只有 FB），視作蘋果 sub-channel，不拆分

原生數碼媒體

以網絡平台、移動端平台作為首發產品，並數碼平台 / 第三方平台作為主要內容發佈途徑的新聞媒體。

符合定義：

網站和傳統平台共同計劃，上線時間大致接近

- 香港 01：週報和網站
- 民間電台： 網絡電台與 FM 平台同時推出
- 獨立於母公司 / 品牌創立的網絡媒體品牌
- 《100 毛》雜誌 => 《毛記電視》， Inkstone， Abacus

傳統媒體

以在信息時代之前即存在的媒介形式為主要業務和首發平台的新聞媒體。

網站上線前傳統平台已經運營一段時間，再發展出新平台。

例如：南華早報，明報，各大免費報紙，週刊雜誌

資料來源

相關資料的最後更新日期：29/06/2018

註冊報紙名單

https://www.ofnaa.gov.hk/document/eng/service/news_search/List_of_Registered_Newspapers_EC.pdf

註冊期刊名單

https://www.ofnaa.gov.hk/document/eng/service/news_search/List_of_Registered_Periodicals_EC.pdf

香港的持牌廣播服務一覽表

（2018 年 6 月 1 日）

https://www.ofca.gov.hk/filemanager/ofca/tc/content_108/channel_list_chi.pdf

ICRIS

<https://www.icris.cr.gov.hk/csci/>

包括的媒體

原生網媒（28）

1. 香港 01
2. 立場新聞
3. 端傳媒
4. 香港獨立新聞
5. 傳真社
6. 眾新聞
7. 100 毛 / 毛記電視
8. 巴士的報
9. 謎米香港
10. 輔仁媒體
11. 香港獨立媒體
12. 852 郵報
13. 社會記錄頻道
14. 玩生活 · 樂科技

報章 - 中文 (11)

15. 橙新聞
16. 圈新聞 (圈傳媒)
17. 輕新聞
18. 香港網絡大典
19. HKG 報
20. 線報
21. 拉闊電視
22. 港人講地 (圈傳媒)
23. 幫港出聲
24. 源傳媒
25. 點新聞
26. Inkstone
27. Abacus
28. 本土新聞

垂直媒體 / 小眾媒體 / 另類媒體 (5)

1. 阿思達克財經
2. 財華社
3. 濠博新聞
4. 鋒投
5. 華富財經

1. 香港經濟日報
2. 香港商報
3. 蘋果日報
4. 星島日報
5. 明報
6. 文匯報
7. 成報
8. 大紀元時報 (香港版)
9. 大公報
10. 信報財經新聞
11. 東方日報

雜誌 (5)

1. 亞洲週刊
2. 號外
3. 壹週刊
4. 鏡報月刊
5. 經濟一週

報章 - 英文 (2)

1. 南華早報
2. 中國日報香港版

全港派發（10）

1. 英文虎報
2. 都市日報
3. 頭條日報
4. Am730
5. 晴報
6. 人民報
7. 水曜新聞
8. 香港郵報
9. 熱血時報
10. 印度尼西亞新聞

公營廣播機構（1）

1. 香港電台

持牌廣播電台（2）

1. 商業電台
2. 新城電台

免費電視（3）

1. 電視廣播有限公司
2. 奇妙電視
3. 香港電視娛樂

收費電視（2）

1. 香港有線電視有限公司
2. 電訊盈科媒體有限公司

不包括的媒體

地區報

- 星島地區報（不符合定義，只有網站）
- 將軍報（不符合定義，只有報紙與 Facebook）
- 大嶼報（大嶼 pop，符合定義，有網站有 Facebook）
- WE 週報（不符合定義，只有報紙跟 Facebook）
- 美新報（不符合定義，只有報紙
- 南區新聞（符合定義，有網站）

中英文政府報章 / 憲報

- 香港特別行政區政府憲報 - announcement，可排除

僅許可

- 彭博商業週刊

母報合併（副刊，子欄目）

- 明周，明月（明報）
- SCMP Young Post（南華早報）
- 果籽，飲食男女（壹傳媒）
- 東 Touch，東周刊，JET，PCM 電腦廣場（星島）

智富雜誌，U 周刊（經濟日報）

東方新地，新假期，新 Monday，流行新姿（新傳媒集團），經濟一週

不符合定義

香港新聞網（<http://www.hkcnahk/index.shtml>）只有網站，FB 專頁
無法顯示

教協報

普羅政治學院：MyRadio，癲狗日報

香港人民電台，香港人網：停播，停刊

最終媒體名單

香港 01，立場新聞，端傳媒，HKFP，FactWire，眾新聞，毛記電視，
巴士的報，謎米香港，輔仁媒體，香港獨立媒體，852 郵報，SocREC，
unwire.hk，橙新聞，圈新聞，輕新聞，TMHK，HKG 報，線報，拉闊電
視，港人講地，幫港出聲，源傳媒，點新聞，阿思達克財經，財華社，
Allin Media Limited，鋒投，華富財經，香港經濟日報，香港商報，蘋果日
報，星島日報，明報，文匯報，成報，大紀元時報，大公報，信報財經新
聞，東方日報，亞洲週刊，南華早報，中國日報香港版，英文虎報，都市
日報，頭條日報，Am730，晴報，人民報，水曜新聞，香港郵報，香港電
台，商業電台，新城電台，電視廣播有限公司，奇妙電視，香港電視娛樂，
香港有線電視有限公司，電訊盈科媒體有限公司，Inkstone，Abacus，熱
血時報，印度尼西亞新聞，號外，壹週刊，鏡報月刊，經濟一週，本土新
聞，大時代財經月刊，港報，開放雜誌，資本雜誌（資本壹周、資本才
俊 + 企業家），Finance Asia，Hong Kong Herald，Hong Kong Business

Magazine，D100，先機網，流動新聞，思考香港，民間電台，城寨，香港
花生，創動力媒體，香港天樂新聞網，免費電子娛樂生活雜誌 iMag，inHK
Magazine

（總計：87 家）

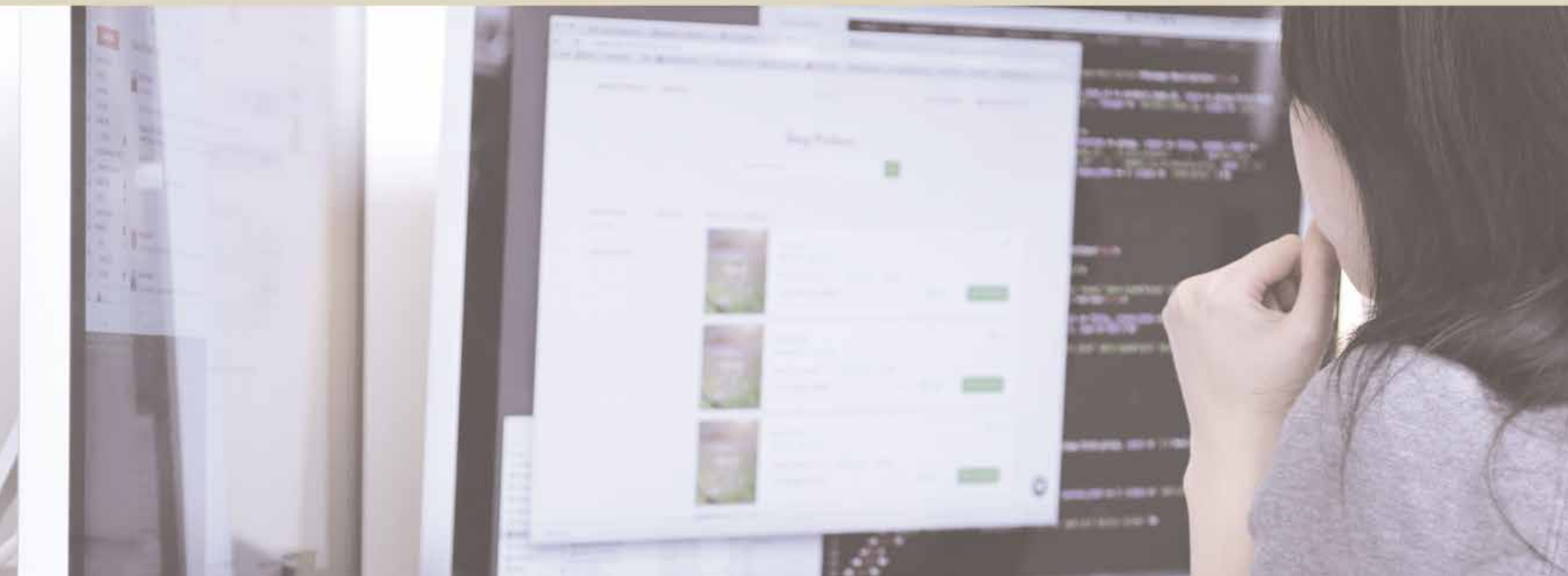
（作者：黃瓊瑤 香港浸會大學傳理學院博士研究生，湯銳彬 香港浸
會大學傳理學院新聞系中文新聞專修四年級學生，胡辟礫 香港浸會大學傳
理學院新聞系講師、劉莉萍 香港浸會大學傳理學院博士研究生；數據搜集：
徐雨燦 香港浸會大學傳理學院研究助理，袁潔瑚 香港浸會大學傳理學院
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傳理學院新聞系數碼與媒體傳播專修三年級學生）



● 第六章

香港媒體社交平台分析

張榮顯、李藹明、黃纓杰





目前香港的傳統媒體市場上主要有二十二份新聞報刊，其中包括五份免費報紙；十三份新聞雜誌；六家電視台和三家電台。²

紙媒方面（參考表 6.1），所有媒體均開設了 Facebook 專頁；除雜誌 100 毛之外，所有紙質媒體均設有網站。所有的報刊和近一半的新聞雜誌都有移動客戶端程式（APP）。如果說內地的媒體網絡化和社交化可以用「兩微一端」（微博＋微信＋移動客戶端）來概括，香港紙質媒體的網絡化從總體上概括則是以「網站＋Facebook＋移動客戶端」的模式為主。這也呼應了香港高企的智能手機擁有率（88.6%）³ 和 Facebook 使用率（72%）⁴ 的現狀。

相比雜誌，報刊在媒體網絡化層面涉及更廣，十九份報刊中有近一半（九份）設有網站、Facebook 專頁、Twitter、YouTube、Instagram 賬號以及移動客戶端 APP。這當中既包括嚴肅報紙如《明報》、《南華早報》、《經濟日報》，也有像《蘋果日報》這類純商業化的報紙，以及以擴大流量為盈利基礎的三份免費報紙：《頭條日報》、《am730》和《晴報》。

《蘋果日報》屬較早進行網絡化轉型的報刊，它於 2009 年在香港和台灣推出了蘋果動新聞，以電腦動畫的方式描繪新聞，用戶可於手機和電腦上觀看。雖然動新聞的形式屢屢受到學界和業界的質疑和批評，但客觀

2 本文所列舉的新聞媒體主要指於香港地區進行內容製作生產、截至 2018 年 7 月仍在運營的，以傳播新聞資訊為主的媒體。以潮流生活資訊為主的媒體、宗教媒體、政黨所屬的媒體平台以及智庫型媒體，均未納入分析。

3 數據來源為香港政府統計處 2017 年 6 月－9 月調研。

4 數據來源為數據分析公司 We Are Social 於 2016 年第四季度的資料。

在媒體高度發達的香港，傳統媒體和新媒體融合的議程從互聯網普及初期就已展開：1995 年香港已有包括《文匯報》、《星島日報》、《南華早報》、《英文虎報》等在內的報紙推出了網絡版。¹ 隨着數碼化技術的發展，近年來媒體的形態已超越「報＋網」的模式，發生了深刻的變革。傳統媒體積極擁抱互聯網，尤其是社交媒體及網絡媒體的湧現已是當今傳媒業不爭的事實。本文將首先對香港媒體網絡化這個大背景進行一個基本的梳理，再着重對媒體的社交網絡化進行分析。

1 資料來源：《陳昌鳳：香港報業競爭的消長》，<https://read01.com/Dnj0a.html>。

上為《蘋果日報》收穫了不少用戶。目前，動新聞欄目在 YouTube 的訂閱量已超過 116 萬人次，其 APP 也經常位於香港新聞 APPs 下載量前列位置。

此外，銷量第一的《東方日報》和專業類財經報紙《信報》除了在 Instagram 外，在上述社交媒體均設有賬號。被視為親中派和親政府報章，如《大公報》、《文匯報》、《成報》、《星島日報》等則較少採用包括 YouTube 和 Instagram 在內的視覺類社交媒體。

表 6.1 香港主流傳統媒體網絡化列表（報紙、雜誌類）














傳統媒體	
報紙	
明報	     
蘋果日報	     
南華早報	     
熱血時報	     
香港經濟日報	     
頭條日報	     
am730	     
晴報	     
香港 01 週報	     
東方日報	    
信報	    
都市日報	    
文匯報	   

（續上表）

傳統媒體	
報紙	
大公報	   
成報	   
香港商報	   
大紀元時報（港版）	   
星島日報	  
中國日報香港版	  
英文虎報	  
水曜新聞	  
香港郵報	  

雜誌	
Hong Kong Business Magazine	    
明報周刊	    
壹週刊	    
ED 經濟一週	    
Finance Asia	   
資本雜誌	   
大時代財經月刊	   
號外	   

(續上表)

雜誌	
Harbour Times	  
開放雜誌	  
亞洲周刊	  
鏡報月刊	 
100 毛	 



















































「網頁 + Facebook」仍是雜誌最多採用的網絡化形式。其中，*Hong Kong Business Magazine*、《明報週刊》、《壹週刊》等財力較為雄厚的刊物在社交媒體領域鋪設面相對較廣。《100 毛》屬於當中媒介網絡化經營的佼佼者。於 2013 年發行的雜誌《100 毛》銷量可觀，同時段開拓了「100 毛」Facebook 專頁，2015 年又開拓了反諷傳統大台 TVB 的網絡電視台「毛記電視」及其 Facebook 專頁。毛記電視網站錄得累計超過 2 億人次的頁面訪問量，「100 毛」和「毛記電視」的 Facebook 專頁累計獲得超過 120 萬個和 73 萬個讚好數。2018 年雜誌合夥人創立的「毛記葵涌」公司成功上市，同時《100 毛》宣佈於 2018 年 8 月停止紙質版發行，專攻網絡版製作經營。

與社交媒體的網絡化融合，為傳統媒體帶來了可觀的用戶流量。《香港尼爾森媒介指標 2017 年終報告》數據顯示，香港地區日報的總體平均讀者人數較 2016 年遞增 3.3%，其中社交媒體版本貢獻了 2% 增長率；社交媒體亦令雜誌（週刊和月刊）整體讀者人數增長近 2%。

香港的電子媒體（電視台和電台）的網絡融合程度也比較高（參見表 6.2），其中 Now TV、香港電台 RTHK、商業電台都擁有包括網站、Facebook、Twitter、YouTube、Instagram 和移動客戶端六種網絡化內容

管道，其餘的電視台和電台也擁有五種或四種網絡化內容管道。其中，「Facebook + YouTube」是所有電子媒體社交化的標準配置。

表 6.2 香港主流傳統新聞媒體網絡化列表（電視台、電台類）

傳統媒體														
電視台			持牌廣播電台											
Now 新聞台							香港電台							
無線電視							商業電台							
有線電視							新城電台							
拉闊電視														
奇妙電視														
ViuTV														
注：  表示網站；  表示 Facebook；  表示 Twitter；  表示 YouTube；  表示 Instagram；  表示 APP														

在傳統媒體向新媒體融合之餘，香港一些網絡新聞媒體依託網站和社交媒體，於 2002 年前後開始活躍。這些網媒通常發端於 Facebook，其創立者主要為前主流媒體從業者、評論人、政治人物和商人。這當中既有成規模的綜合性新聞平台，又有小成本、小規模的網絡傳媒。本文梳理了四十四個香港網絡傳媒，將其分為新聞網絡平台（二十四個）、網絡報紙（五個）、網絡電台（七個）、網絡電視（兩個）、網絡雜誌（兩個）、新聞直播平台（一個）和財經新聞平台（三個）共七類（參見表 6.3 和表 6.4）。

新聞網絡平台、網絡報紙、網絡電台、網絡電視和財經類新聞平台的網絡化形式最為多元，例如一半（十二個）的新聞網絡平台擁有五至六種網絡內容渠道，其中網站、Facebook 和 YouTube 是最多被採用的媒介形式，其次為 Twitter、App 和 Instagram。60% 的網絡報紙擁有五種及以上的內容渠道，最常被採用的媒介渠道為網站、Facebook、Twitter 和 YouTube。網絡電台的網絡渠道比例和網絡報紙相若，除網站和 Facebook 外，Twitter 和 YouTube 是最多被採用的媒介渠道，71.4% 的網絡電台擁有自己開發的 APP，其餘的主要借助於其他網上電台聚合類 APP 開拓移動客戶端市場。

表 6.3 香港主要新聞網絡社交媒體列表（網絡平台、網絡報紙、網絡電台類）

網絡媒體			
網絡平台		網絡報紙	
端傳媒	     	852 郵報	     
香港 01	     	巴士的報	     
立場新聞	     	香港 G 報	    
香港獨立媒體	     	LinePost 線報	   
輕新聞	     	Hong Kong Herald	  
Hong Kong Free Press	     		







（續上表）

點新聞	     	網絡電台	
Inkstone	    	D100	     
FactWire 傳真社	    	香港天樂媒體網	    
先機網	    	創動力媒體	    
流動新聞	    	香港花生	    
幫港出聲	    	城寨	    
橙新聞	   	謎米網	   
港人講地	   	民間電台	   
眾新聞	   		
Abacus	   		
Berita Indonesia	   		
本土新聞	  		
思考香港	  		
Truth Media Hong Kong	  		
圈新聞	  		
源新聞	  		
人民報	  		
輔仁媒體	 		

部分新聞網絡平台也從線上轉而開拓線下市場。2016 年 1 月上線的「香港 01」除發展了多種網絡內容渠道外，還推出了《香港 01》週報。本土派人士於 2012 年創立的《熱血時報》，不僅有網絡平台、網絡電台、網絡商店，還發行了紙質版報刊。可見發展線下媒體形式亦是幫助網媒獲取知名度、增加流量和盈利的一個手段。

網絡電視和財經類新聞平台採用的社交媒體種類較為豐富，包括了 Facebook、YouTube、Instagram 幾種。和上述網媒相比，新聞直播平台 and 網絡雜誌的社交媒體化形式則相對簡單（參見表 6.4），主要延續「Facebook + YouTube」為主的組合。

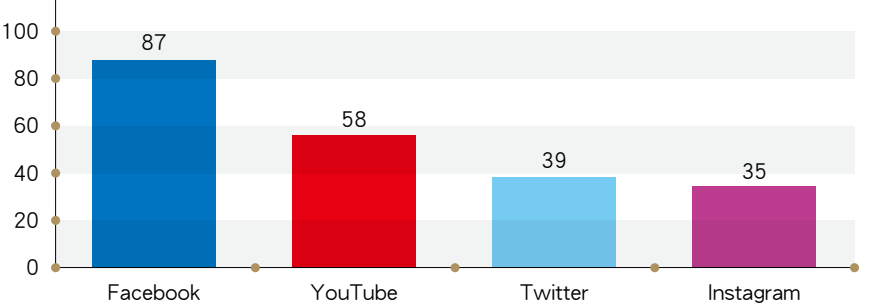
表 6.4 香港主要新聞網絡媒體列表（網絡雜誌、網絡電視、新聞直播平台、財經新聞類）

網絡媒體			
網絡電視		網絡雜誌	
毛記電視	    	iMag	  
香港天樂媒體	  	inHK Magazine	 
新聞直播平台		財經新聞平台	
SocREC 社會記錄頻道	  	阿思達克財經網	    
		華富財經	   
		財華香港網	 
注：  表示網站；  表示 Facebook；  表示 Twitter；  表示 YouTube；  表示 Instagram；  表示 APP			

香港媒體社交媒體化現狀

接下來本文將着重分析香港媒體的社交媒體化現象。總結而言，本文梳理了 87 個⁵ 包括傳統媒體和網絡媒體在內的香港媒體的社交媒體化現狀。對比發現，Facebook 是香港媒體最常用的社交媒體形式，87 家媒體均擁有 Facebook 賬號。其次常用的社交媒體依次為 YouTube（58 家媒體採用）、Twitter（39 家媒體採用）⁶ 和 Instagram（35 家媒體採用）（參考圖 6.1）。

圖 6.1 擁有社交媒體賬號的香港媒體個數



這些媒體在社交網站上不僅擁有自己主要的官方賬號，很多還為自己的子媒體、具體的欄目或板塊開通了社交賬號。比如《香港 01》，為自己旗下的「01 深度」、「01 新聞」、「01 熱話」等十五個欄目均開設了 Facebook 專頁。如表 6.5 所示，87 個媒體共開設了 390 個社交媒體賬號，分別由 217 個相關的 Facebook 賬號、47 個 Twitter 賬號、80 個

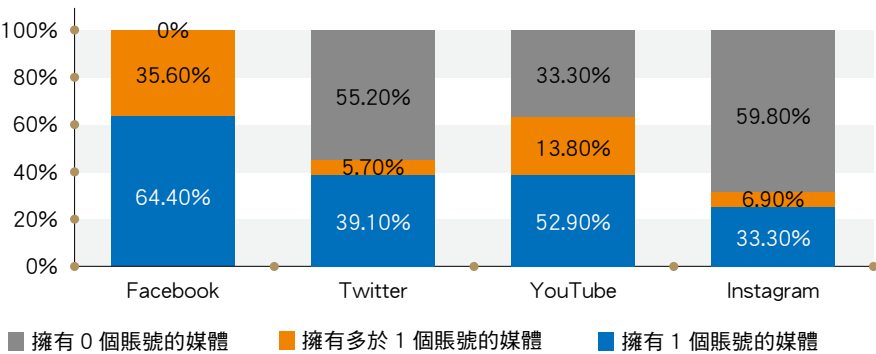
5 因其均屬於毛記葵涌旗下媒體，進行社交媒體化分析時將《100 毛》雜誌和毛記電視合併為一類媒體，故此處媒體總數為 87 個。
6 《大公報》和《文匯報》共用一個 Twitter 賬號，此處作兩個賬號計算。

YouTube 賬號和 46 個 Instagram 賬號組成。平均每個媒體管理的社交媒體賬號數為 4.48 個。

表 6.5 香港媒體社交媒體賬號數

社交媒體類型	帳號數目	每個媒體平均持有帳號
YouTube	80	0.92
Instagram	46	0.53
Twitter	47	0.54
Facebook	217	2.49

圖 6.2 擁有社交媒體賬號的媒體比例



賬號擁有比例最高的社交媒體類型為 Facebook，64.4% 的媒體擁有 1 個 Facebook 賬號，35.6% 的媒體擁有多個 Facebook 賬號；賬號擁有比例第二的社交媒體類型為 YouTube，52.9% 的媒體擁有 1 個 YouTube 賬號，13.8% 的媒體擁有至少 2 個 YouTube 賬號，而 33.3% 的媒體沒有開通 YouTube 賬號。賬號使用比例最低的社交媒體為 Instagram，59.8% 的媒體沒有採用 Instagram，僅 6.9% 的媒體擁有多於 1 個 Instagram 賬號。

2018 年香港社交網絡熱點綜述

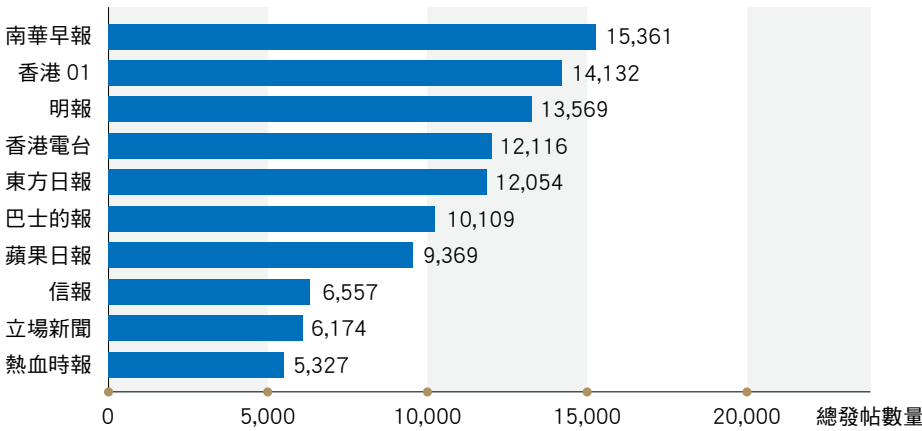
——以 4 月至 6 月為例

平台及媒體分析

本文利用源大數據科技有限公司的網絡數據及分析平台 uMiner[®] 對香港媒體所管理的 214 個 Facebook 賬號、47 個 Twitter 賬號、80 個 YouTube 賬號和 46 個 Instagram 賬號，針對報道熱點、報道類型和傳播效果等方面進行分析。

源大網絡數據及分析平台 uMiner[®] 在 2018 年 4 月至 6 月間，共錄得香港媒體所發佈的 145,030 則 Facebook 主帖、37,115 則 Twitter、8,983 則 YouTube 視頻和 2,960 則 Instagram 發佈。媒體在四個社交媒體平台的排名如上圖，《南華早報》、《香港 01》和《明報》為研究時間段內社交媒體上總發帖量的前三位媒體。

圖 6.3 總發帖數量排名 Top 10



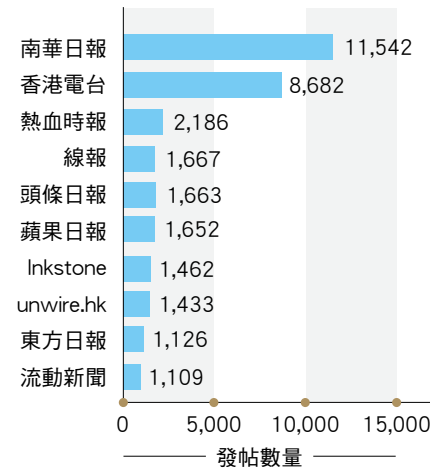
下圖為媒體在各個社交媒體平台上的發帖量排名。《蘋果日報》在社交媒體上較為活躍，在四個社交媒體平台上的發帖量均佔據前 10 名位置。

除 Facebook 首位為網絡媒體（香港 01）佔據外，其他三類社交媒體平台的發帖量首位均為傳統媒體。除 Twitter 發帖量排名中網媒和大眾媒體比例持平外，其他三類社交媒體平台的發帖量前 10 的媒體構成均為大眾媒體略多於網媒，這反映了傳統媒體對投放社交媒體平台資源的重視。

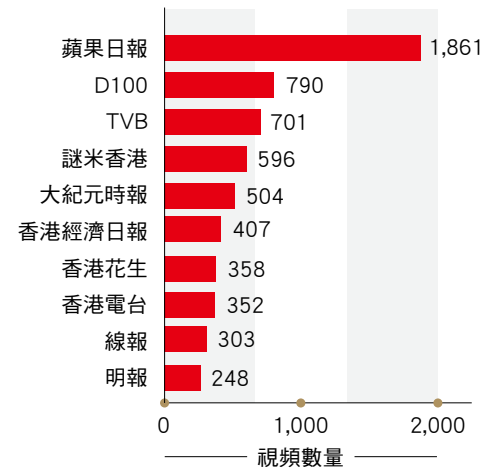
Facebook 發帖量排名 Top 10



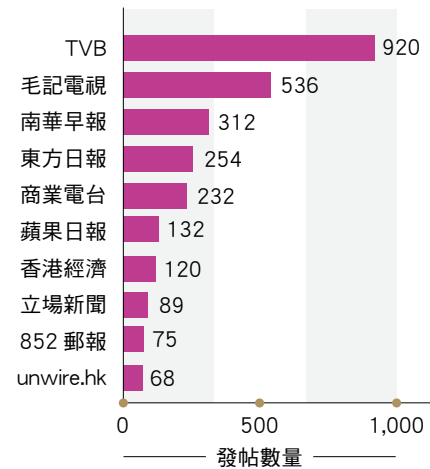
Twitter 發帖量排名 Top 10



YouTube 影片數量排名 Top 10



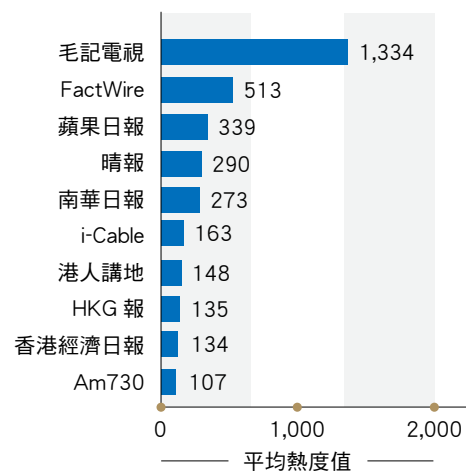
Instagram 發帖量排名 Top 10



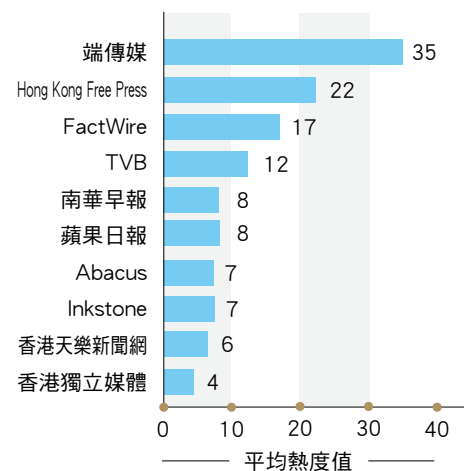
針對媒體在各社交媒體平台上發佈內容的每則發佈帖文平均熱度值，⁷ 本文以 uMiner[®] 系統分析排名。熱度值是一個綜合考慮不同媒體的傳播特點，結合具體的數字特徵（如：閱讀數、點讚數、分享數、表情數、點擊率等），用來刻畫文章、賬號或同等個體的傳播熱度的一種綜合評價指數。數值愈大對應熱度愈熱，反之則反。如下圖所示，毛記電視、《蘋果日報》、《南華早報》在三類社交媒體平台表現活躍，其平均熱度值分別進入了前 10 名；Factwire、《香港經濟日報》在兩種社交媒體平台上的平均熱度值進入了前 10 名。大眾媒體在 Instagram 和 Facebook 平台上收穫的互動性較高：Instagram 平均熱度值排名前 10 的媒體中，70% 為傳統大眾媒體；Facebook 平均熱度值排名前 10 的媒體中，50% 為傳統大眾媒體。網絡媒體則在 Twitter 和 YouTube 平台上獲得的互動反饋較高：Twitter 平均熱度值排名前 10 的媒體中，70% 為網絡媒體；YouTube 排名前 10 的媒體中，60% 為網絡媒體。

7 Facebook 熱度值 = 評論數 + (點讚數 + 勁正 + 嘩 + 哈哈 + 悲傷 + 憤怒 + 感恩) / 16 + 分享數 / 0.7；
Twitter 熱度值 = 點讚數 + 2 * 分享數；
YouTube 熱度值 = 評論數 + 點讚數 / 2.865 + 點擊率 / 492.189；
Instagram 熱度值 = 評論數 + 點讚數 / 68.017 + 點擊率 / 415.094。
權重計算方法：以 Facebook 為例，熱度值是評論數、點讚數、表情數（勁正、嘩、哈哈、悲傷、憤怒、感恩）、分享數綜合加權而來。以 2017 年百萬量級的隨機樣本測算，選取（表情數 / 評論數）的中位數（16）用來刻畫表情數與評論數的比例關係，即表明 16 個表情總數對應 1 個評論數，體現在熱度值公式中就是當表情數的權重係數是單位 1 時，評論數的權重係數則為 16。0.7 倍的評論數產生 1 個分享，體現在熱度值公式中就是當分享數的權重為 1 時，評論數的權重係數則為 0.7。權重可能會隨着時間及議題的變動有所變動。其他媒體類權重計算方法同上。

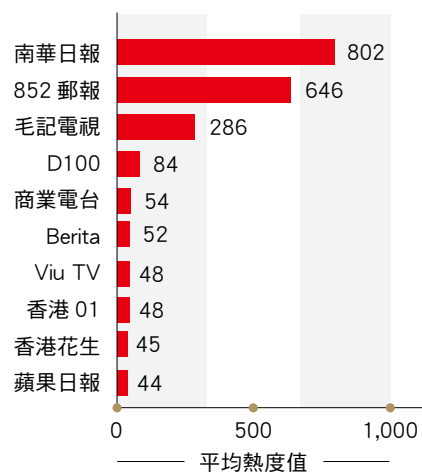
Facebook 平均熱度值



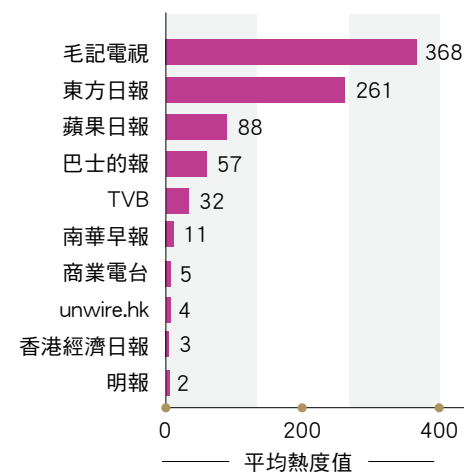
Twitter 平均熱度值



Facebook 平均熱度值



Instagram 平均熱度值

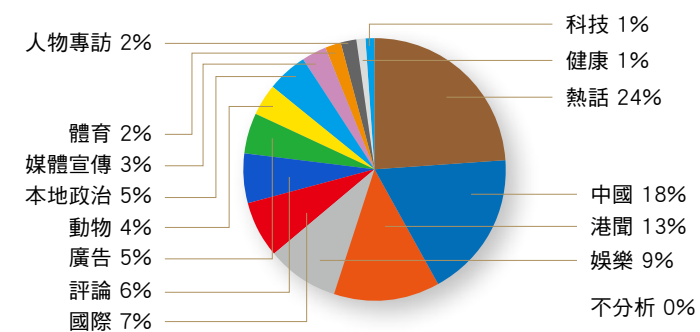


熱帖分析

為更深入分析香港媒體於各大社交媒體平台的表現及行為，本文先以大數據技術分析，為四大平台上所有帖文以熱度值排序，得出期間表現最好的首 100 名熱帖後，再仔細分析這些帖文所屬板塊、報道主題、發佈類型及媒體表現。

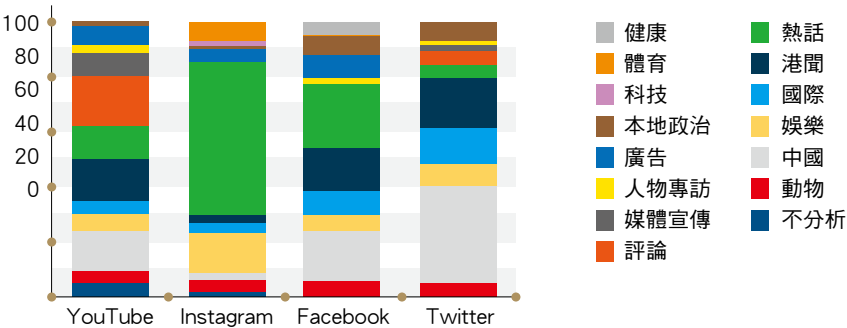
研究員以人工方式按帖文內容，把來自四大平台上一共 400 則熱帖分為 14 大類板塊，再統計其中出現最多的板塊內容。板塊的分類依據主要借鑒報刊對新聞的分類，如發生於香港本地的政治、社會新聞稱為「港聞」；發生於大陸、澳門和台灣的新聞稱為「中國」；針對娛樂明星動向的新聞稱為「娛樂」；逸聞趣事或消遣類信息稱為「熱話」等。研究發現，整體而言「熱話」是社交平台上最受歡迎的板塊，共有 98 則帖文，佔全數 400 則帖文近四分之一，這些帖文包括轉載來自 Facebook、抖音、Twitter 等社交媒體上瘋傳的熱話，以及由媒體創作的的生活資訊分享及社會實驗。「中國」板塊居次，共有 72 則帖文，佔整體近兩成，相關帖文包括內地趣聞、社會及政治新聞等。而「港聞」則居於「中國」之後，佔 13.3%。詳見下圖：

整體熱帖板塊分佈



* 無法追溯的連結，以及中英文以外的帖文，本文將不予分析。

四大平台熱帖板塊分佈



四大平台前 100 則熱帖所屬板塊統計

板塊	YouTube	Instagram	Facebook	Twitter	合共	%
不分析 *	4	1	0	0	5	1.3%
動物	4	5	5	4	18	4.5%
中國	15	2	19	36	72	18.0%
娛樂	7	15	5	8	35	8.8%
國際	4	3	9	13	29	7.3%
港聞	16	3	16	18	53	13.3%
熱話	12	57	24	5	98	24.5%
評論	18	0	0	6	24	6.0%
媒體宣傳	9	0	0	1	10	2.5%
人物專訪	3	0	1	2	6	1.5%
廣告	6	4	9	0	19	4.8%
本地政治	2	2	7	7	18	4.5%
科技	0	1	0	0	1	0.3%
體育	0	7	1	0	8	2.0%
健康	0	0	4	0	4	1.0%
Total	100	100	100	100	400	100.0%

對每個社交媒體獨立分析（詳見上圖表）可發現，在 YouTube 平台上，前 100 則熱帖中有 18 則屬於「評論」板塊，而「港聞」居次，有 16 則，「中國」緊隨其後，有 15 則。然而在該平台的前十大熱帖當中，「動物」則與「中國」同樣佔了 3 則，可見「動物」帖文雖然數量不多（共 4 則），但排名卻相當優秀。

在 Instagram 上，「熱話」呈壓倒性優勢，佔去熱帖逾半，有 57 則，是居次的「娛樂」帖數（15 則）近四倍，而港聞則只有寥寥 3 則。在十大熱帖中，同樣以「熱話」佔去其中 8 席，「娛樂」及「動物」各佔一席。

Facebook 上「熱話」亦最甚受歡迎，熱帖數量居首，佔 24 則，其次是「中國」（19 則）。在十大熱帖中，板塊相對分散，「熱話」佔 3 席居首，而「動物」、「中國」及「廣告」都各佔兩席。

在 Twitter 上「中國」帖文居首，佔 36 則。「港聞」則居次，有 18 則。在十大熱帖中，依然以「中國」為多，佔 6 席，其次是港聞（兩席）。詳見下表：

十大熱帖所屬版塊

	Facebook	Twitter	Instagram	YouTube
排名第 1 的熱帖	中國	中國	熱話	動物
排名第 2 的熱帖	動物	國際	熱話	中國
排名第 3 的熱帖	動物	港聞	娛樂	中國
排名第 4 的熱帖	熱話	中國	動物	娛樂
排名第 5 的熱帖	熱話	中國	熱話	動物
排名第 6 的熱帖	中國	中國	熱話	國際
排名第 7 的熱帖	熱話	中國	熱話	國際
排名第 8 的熱帖	港聞	評論	熱話	中國
排名第 9 的熱帖	廣告	中國	熱話	動物
排名第 10 的熱帖	廣告	港聞	熱話	熱話

值得注意的是，在 Facebook 和 Instagram 上，「動物」帖文雖然在 100 帖中為數不多（共 18 則），但往往能躋身十大（6 則，33.3%），且排名大部分都在首五位以內。

綜觀而言，無論以數量及排名而言，「熱話」在社交平台上都相對受歡迎。「中國」新聞種類多元，數量眾多，但除了 Twitter 以外，以排名而言則以軟性新聞更易躋身十大。相對而言，嚴肅新聞一般較難進入十大熱帖。反而在 Twitter 上情況甚為不同，十大新聞全部屬於嚴肅新聞。

報道主題方面，研究人員先以人工把帖文提煉成不同主題，再依社交平台分類，找出各個板塊中被提及得最多的主題，作為熱門主題。如果在平台上該板塊的討論較零碎，未能歸類出主題，此處將不予分析。

結果發現，在中國版的熱帖中，Facebook 上可歸納出的主題包括「川航機長成功迫降」及「虹鱒魚扮三文魚」兩大主題；Twitter 上則以「劉霞獲准出國」為主題，同時亦能列入十大熱帖之中，佔據一席。

娛樂版熱帖在四大平台上都有歸納出主題。在 Facebook 上主題是「家燕姐兒子結婚」，在 Instagram 上則是「復仇者聯盟 3 上映」，YouTube 上是「陳自瑤王浩信分居」，而 Twitter 上則是「李連杰健康狀況惡化」。

國際熱帖相對集中，在 Facebook 和 Twitter 上都以「馬來西亞大選」為主題。

港聞熱帖則包括 Facebook 的「廣東話母語討論」、YouTube 的「唐琳玲法庭拍照案」，以及 Twitter 上的「Now TV 記者採訪 709 大抓捕被扣押」。

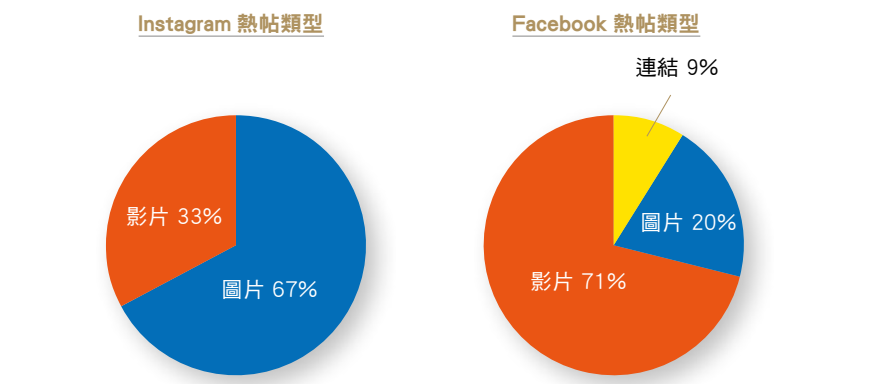
熱話方面主題十分分散，只能在 Twitter 上歸納出「翻版金正恩抵達新加坡」此主題。而評論則在 YouTube 上以「中美關係」；本地政治以 Facebook 上「土地大辯論」為主題，以及 Twitter 上「六四紀念活動」亦

討論甚多。體育方面則在 Instagram 中歸納出「2018 世界盃」為主題（見下表）。

主題	Facebook	Instagram	YouTube	Twitter
動物	\	\	\	\
中國	中國川航機長成功迫降	\	\	劉霞獲准出國
	虹鱒魚扮三文魚	\	\	\
娛樂	家燕姐兒子結婚	復仇者聯盟 3 上映	陳自瑤王浩信分居	李連杰健康狀況惡化
國際	馬來西亞大選	\	\	馬來西亞大選
港聞	廣東話母語討論	\	唐琳玲法庭拍照	Now TV 記者採訪「709 大抓捕」被扣押
熱話	\	\	\	翻版「金正恩」抵達新加坡
評論	\	\	中美關係	\
人物專訪	\	\	\	\
本地政治	土地大辯論	\	\	六四紀念活動
科技	\	\	\	\
體育	\	2018 世界盃	\	\
健康	\	\	\	\

發佈帖文類型方面，本文分析了 Instagram 和 Facebook 的熱帖發佈類型。Twitter 和 YouTube 由於類型單一，不會特別分析。

在首 100 名熱帖當中，Instagram 有 67% 的帖文以圖片形式發佈，而影片則佔 33%。在 Facebook 上，熱帖當中以影片為多，佔七成，其次是圖片（20%）和連結（9%）。見下圖：



針對兩個平台獨立分析，可發現在 Facebook 上影片的效果明顯更優。除了在 100 熱帖中有七成屬影片外，在十大熱帖中，影片亦佔據九成席位。

在 Instagram 上，圖片的排名較好，在十大熱帖中有七則都屬於圖片。然而同樣值得關注的是，在這七則圖片熱帖中，全部來自同一媒體毛記電視，而餘下三則影片熱帖則全部來自《東方日報》。由於個別媒體的受歡迎程度或會帶來影響，難以斷言在 Instagram 上圖片是較優秀的載體。

Facebook 十大熱帖所屬類型

1	影片
2	影片
3	影片
4	影片
5	影片
6	影片
7	影片
8	圖片
9	影片
10	影片

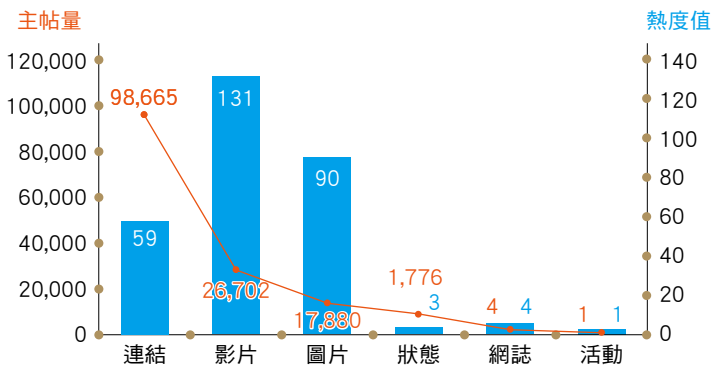
Instagram 十大熱帖所屬類型

1	圖片
2	圖片
3	圖片
4	影片
5	圖片
6	影片
7	圖片
8	圖片
9	圖片
10	影片

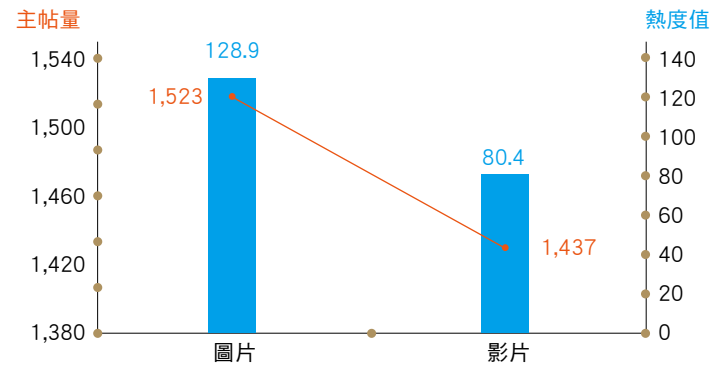
為了更具體了解帖文發佈類型對熱度值的影響，本文擴大分析範圍，以大數據技術統計 2018 年 4 月至 6 月期間 Facebook 和 Instagram 上所有帖文以發佈類型的熱度值。結果發現，在 Facebook 眾多帖文中，雖以連結數量最多（98,665 則），是數量居次的影片數量（26,702 則）的三倍以上，但影片的平均熱度值（131）卻明顯高出，結果和上面熱帖的分析一致，而圖片（17,880 則）亦錄得相當不俗的平均熱度值（90）。

在 Instagram 上圖片發佈量（1,523 則）雖多，但同樣平均熱度值（128.9）亦相對影片（1,437 則，平均熱度 80.4）為高，結果亦與百大熱帖的分析相符。

2018 年 4 至 6 月 Facebook 帖文類型與熱度值分析



2018 年 4 至 6 月 Instagram 帖文類型與熱度值分析



媒體表現分析方面，以四個平台的 400 則熱帖中出現的次數而論，整體而言毛記電視表現最佳，共有 110 則帖文，佔整體熱帖數量逾四分之一（27.5%），而且在 Instagram 和 Facebook 上都是最多熱帖的媒體。

其次是《南華早報》，在 400 帖中出現共 87 次（21.75%），並在 YouTube 和 Twitter 上都成為最多熱帖的媒體。

在兩大巨頭爭奪下，位列其後的有 *Hong Kong Free Press*（31 則，7.8%）、《蘋果日報》（30 則，7.5%）及《東方日報》（30 則，7.5%）。詳見下表：

媒體（只顯示有熱帖媒體）	YouTube	Instagram	Facebook	Twitter	總數
香港 01	5	0	1	0	6
端傳媒	0	0	0	20	20
Hong Kong Free Press	0	0	0	31	31
FactWire	0	0	1	0	1
毛記電視	10	72	28	0	110
謎米香港	3	0	0	0	3
852 郵報	10	0	0	0	10
線報	1	0	0	0	1
港人講地	0	0	2	0	2
香港經濟日報	1	0	4	0	5
蘋果日報	16	0	11	3	30
星島日報	0	0	2	0	2
明報	1	0	0	0	1
東方日報	1	28	1	0	30
南華早報	25	0	22	40	87
都市日報	0	0	1	0	1
Am730	0	0	5	0	5
晴報	0	0	6	0	6
香港電台	3	0	4	0	7
商業電台	2	0	0	0	2
電視廣播有限公司	7	0	0	0	7
Viu TV	2	0	0	0	2
香港有線電視有限公司	0	0	10	0	10

（續上表）

媒體（只顯示有熱帖媒體）	YouTube	Instagram	Facebook	Twitter	總數
Inkstone	0	0	0	5	5
Berita Indonesia（印尼語）	4	0	0	0	4
經濟一週	0	0	1	0	1
D100	6	0	0	0	6
unwire.hk	0	0	1	0	1
香港花生	3	0	0	0	3
香港天樂新聞網	0	0	0	1	1

同樣值得關注的是，在 YouTube、Facebook 和 Twitter 上，百大熱帖中都有不少媒體互相競爭，能進入百大的媒體平均佔有開設帳號的媒體總數 21%；但在 Instagram 中雖有 35 個媒體、46 個帳號，卻只有兩個媒體完全佔據百大熱帖，分別是《東方日報》和毛記電視（見上下表）。

	YouTube	Instagram	Facebook	Twitter
有開設帳號的媒體	58	35	87	39
出現在百大熱帖的媒體	17（29.3%）	2（5.7%）	16（18.4%）	6（15.4%）

以排名而言，能躋身四大平台十大熱帖的媒體當中，以《南華早報》為最大贏家，40 個席位中佔 15 席（37.5%），並分別在 Facebook（5 席）和 YouTube（9 席）上都佔據最多十大席位。其次是毛記電視，佔 12 席（30%），並在 Instagram 上佔據最多十大席位（7 席）。而端傳媒則在 Twitter 上取得最多十大席位（5 席）。

平台十大熱帖所屬媒體

	Facebook	Twitter	Instagram	YouTube
1	南華早報	端傳媒	毛記電視	南華早報
2	南華早報	南華早報	毛記電視	南華早報
3	南華早報	HKFP	毛記電視	南華早報
4	毛記電視	端傳媒	東方日報	南華早報
5	南華早報	端傳媒	毛記電視	南華早報
6	南華早報	HKFP	東方日報	南華早報
7	毛記電視	端傳媒	毛記電視	南華早報
8	蘋果日報	端傳媒	毛記電視	南華早報
9	毛記電視	Inkstone	毛記電視	南華早報
10	毛記電視	蘋果日報	東方日報	毛記電視

綜觀而言，在社交媒體的熱帖表現上，以《南華早報》及毛記電視平分秋色。屬於傳統紙媒的《南華早報》在 YouTube、Facebook 和 Twitter 都有優秀表現，然而它亦在四大平台上都有開設帳號，合共十二個帳號，在眾多媒體之中帳號屬相當多。相較而言，作為網絡媒體的毛記電視只在三個平台（YouTube、Instagram、Facebook）有開設帳號，共有僅五個帳號，卻能取得佳績。

同時比對各大媒體在 2018 年 4 月至 6 月所有發佈帖文的平均熱度值，不難發現毛記電視在 Facebook 和 Instagram 都表現驕人，而《南華早報》在 Facebook 和 Twitter 的平均熱度值都只排名第五。此反映《南華早報》雖然較常打入熱帖前列位置，熱度集中，但毛記電視則是每則帖文平均取得較高熱度值，可謂收視保證。

四大平台十大熱帖完整列表

	發佈日期	主題	類型	版塊	媒體
Facebook 十大熱帖					
1	2018/5/18 19:30	台灣父親女兒婚禮感人致辭	影片	中國	南華早報
2	2018/5/28 17:20	日本柴犬萌態	影片	動物	南華早報
3	2018/5/30 09:00	哈士奇犬萌態	影片	動物	南華早報
4	2018/4/12 21:48	東方昇《月薪代表我的心》	影片	熱話	毛記電視
5	2018/5/28 12:15	翻版金正恩抵達新加坡	影片	熱話	南華早報
6	2018/5/29 09:00	大白兔奶糖生產	影片	中國	南華早報
7	2018/5/3 22:22	《國家級任務》主持人蘭桂芳扮醉	影片	熱話	毛記電視
8	2018/4/16 12:39	本港部分銷售牛油含致癌物質	圖片	港聞	蘋果日報
9	2018/5/31 22:04	求職網廣告求職攻略	影片	廣告	毛記電視
10	2018/6/26 19:00	零食特約廣告《仍是偵緝檔案》	影片	廣告	毛記電視
Twitter 十大熱帖					
1	2018/5/7 10:30	追問四川 512 地震十週年專題	連結	中國	端傳媒
2	2018/6/19 17:35	馬來西亞大選：馬來西亞首相就對華關係接受訪問	連結	國際	南華早報

(續上表)

	發佈日期	主題	類型	版塊	媒體
3	2018/5/16 14:13	Now TV 記者採訪「709 大抓捕」在京受傷並被扣押	連結	港聞	HKFP
4	2018/6/14 15:00	中國政府的監控工具實為美國資助	連結	中國	端傳媒
5	2018/5/5 18:00	追問四川 512 地震十週年專題	連結	中國	端傳媒
6	2018/5/10 11:08	劉霞獲得自由	連結	中國	HKFP
7	2018/5/4 13:00	北大「反性侵」運動參與者遇阻	連結	中國	端傳媒
8	2018/6/21 17:33	讀者來信談陸台學生交流	連結	評論	端傳媒
9	2018/5/15 20:33	陸台關係	連結	中國	Inkstone
10	2018/5/5 20:21	廣東話母語討論	連結	港聞	蘋果日報
Instagram 十大熱帖					
1	2018/6/2 21:14	雪糕英文翻譯錯誤	圖片	熱話	毛記電視
2	2018/5/3 18:13	學生上課繪畫	圖片	熱話	毛記電視
3	2018/4/27 12:37	復仇者聯盟 3 上映	圖片	娛樂	毛記電視
4	2018/5/7 20:42	小狗吃榴連	影片	動物	東方日報
5	2018/5/4 13:22	小童棉被被洗大哭	圖片	熱話	毛記電視
6	2018/5/12 12:30	以氣球代炮仗	影片	熱話	東方日報
7	2018/6/9 15:53	WhatsApp 打錯英文	圖片	熱話	毛記電視
8	2018/6/7 22:04	訛傳風暴消息	圖片	熱話	毛記電視

（續上表）

	發佈日期	主題	類型	版塊	媒體
9	2018/6/7 19:16	學生以 Marvel 電影人物交功課	圖片	熱話	毛記電視
10	2018/6/16 18:23	婆婆鬥食西瓜	影片	熱話	東方日報
YouTube 十大熱帖					
1	2018/4/24 17:20	內地流浪狗被鬥犬攻擊	影片	動物	南華早報
2	2018/4/13 22:45	內地小童模特兒行 catwalk	影片	中國	南華早報
3	2018/6/11 20:30	內地旅客稱日本餐廳歧視	影片	中國	南華早報
4	2018/5/29 16:45	翁靜晶揭穿假和尚	影片	娛樂	南華早報
5	2018/5/24 11:18	台灣寵物犬臨終到海邊吹風	影片	動物	南華早報
6	2018/5/29 15:20	法國難民徒手爬樓救小孩	影片	國際	南華早報
7	2018/6/23 22:00	星漢責罵華人店員不說英語	影片	國際	南華早報
8	2018/6/6 18:29	內地學生高考前撕課本紓壓	影片	中國	南華早報
9	2018/5/15 10:57	內地流浪狗被鬥犬攻擊	影片	動物	南華早報
10	2018/6/11 15:04	《國家級任務》主持人試玩抖音	影片	熱話	毛記電視

總結

積極擁抱互聯網，尤其是發展社交媒體的內容渠道，已成為香港媒體的常態。本文首先對媒體網絡化這個大背景進行了梳理，發現不同類型的媒體集中採用的網絡形式存在不同的側重點。通過對香港八十七家媒體所擁有的網絡媒介形式（網站、移動客戶端 APP 和社交媒體賬號）統計發現，報章和雜誌這兩類紙質媒體最多採用的網絡化模式為「網站 + Facebook + APP」的形式。電台和電視台這兩類電子媒體最集中採用的網絡化模式為「Facebook + YouTube」。原生網絡媒體方面，新聞網絡平台、網絡報紙、網絡電台、網絡電視和財經類新聞平台的網絡化形式最為多元，這幾類媒體中近半數的媒體擁有五種或以上網絡媒介形式。新聞直播平台 and 網絡雜誌的社交媒體化形式則相對簡單，集中為「Facebook + YouTube」為主的組合。

本文着重對香港社交媒體化進行了分析。在所梳理的四個社交媒體中，開設 Facebook 賬號是香港傳統媒體和網絡媒體最常用的社交媒體形式。八十七家媒體均擁有 Facebook 賬號，其次常用的社交媒體依次為 YouTube、Twitter 和 Instagram。這一排序與幾個平台在香港每月活躍社交媒體用戶平台榜單的排名相呼應。⁸ 社交媒體龐大的活躍用戶數吸引媒體紛紛進駐，其自身也成為了信息傳播和社交功能雜糅的載體。

傳統媒體在社交平台上的資源投入略多於網絡媒體。27.2% 傳統媒體和 20.5% 的原生網媒均在四個主要的社交媒體平台上開設了自己的賬號。以 2018 年 4 月到 6 月之間為例，媒體在四個平台的發帖量前 10 位的媒體，

8 數據來源：香港 01 報道〈紙媒寒冬？統計處：年輕人指網媒影響力勝收費報章〉。

除 Twitter 發帖量排名構成為網媒和大眾媒體持平外，其他四個平台的發帖量前 10 位的媒體中，大眾媒體均略多於網絡媒體。

從媒體在社交平台上收穫的熱度值指標來看，以 2018 年 4 月到 6 月之間為例，毛記電視為 Facebook 和 Instagram 上香港媒體發帖平均熱度最高的媒體；端傳媒為 Twitter 上香港媒體發帖平均熱度最高的媒體；《南華早報》的 YouTube 頻道為香港媒體平均熱度最高的媒體。從香港媒體在各平台平均熱度值前 10 位的排名來看，位列 Instagram 前 10 位的傳統大眾媒體（70%）多於網絡媒體（30%），位列 Twitter 前 10 位的網絡媒體（70%）多於傳統大眾媒體（30%）。這或許說明相較於網媒，傳統媒體有更多資源提供圖片和視頻，而網媒更善於經營短文字的消息，收穫了較多的用戶互動行為，如點讚、分享等。

針對 2018 年 4 月至 6 月四個社交平台上媒體發佈的百大熱帖分析，本文嘗試發掘熱帖常見的內容、主題及發佈類型，以了解媒體如何突圍而出。結果發現，在香港媒體的社交媒體平台上，軟性新聞遠較硬性新聞成功取得網民的互動，其中以熱話尤其表現出眾。然而這些熱話之中，除了媒體創作的社會實驗和網絡節目外，不少網絡瘋傳的熱話本來就來自社交媒體，再由媒體重新包裝發佈，反映社交媒體已成為新聞媒體的重要題材。

除了熱話外，「中國」新聞亦包含相當數量的軟性新聞，於社交媒體上較為吃香。在百大熱帖榜中，中國新聞整體總數位列第二，且在個別平台上都名列前茅。

結合新聞主題分析，綜觀不同平台，不難發現嚴肅新聞在社交平台上較難曝光，不但在百大熱帖中數量少，亦較難進入十大熱帖。此情況或與社交平台的性質有關，在 Instagram 上尤為明顯。Facebook 和 YouTube 上帖文種類則較為多元，百花齊放，而 Twitter 上情況甚為不同，嚴肅新聞

收穫了排名靠前的點讚數和分享數。

媒體表現方面，以《南華早報》及毛記電視在熱帖分析中表現最佳，表示兩家媒體的熱帖較多名列前茅。屬於傳統紙媒的《南華早報》在四大平台上都有開設帳號，合共十二個帳號，在眾多媒體之中帳號屬相當多。相應而言，它在 YouTube、Facebook 和 Twitter 的熱帖中亦有優秀表現。《南華早報》發佈的帖文類型亦以影片為主，其優秀表現除了與投放資源有關，或許亦與媒體適應社交媒體生態有關。

作為網絡媒體的毛記電視只在三個平台（YouTube、Instagram、Facebook）開設了五個帳號，卻在這三個平台上都取得佳績。除了集中資源，毛記電視本質上亦以影像為主，較能融入同樣以影像為主的 YouTube 和 Instagram，加上以熱話為主的內容策略，亦是其在社交平台上成功的原因之一。

再觀發佈類型，受歡迎熱帖多以圖像為主。在可發佈多種類型帖文的 Facebook 上，可發現影片的效益最佳，其次是圖片。反而媒體最常用的發佈連結方式，則反應欠佳，熱度值大幅落後，在首百名帖文中只佔九條。

稍微諷刺的是，在社交媒體上表現相對優秀的傳統紙媒，亦以影片爭一日之長短。例如《南華早報》在 Facebook 上的上榜帖文，均近乎全部以影片為發佈模式，並在以影片為主導的 YouTube 上取得熱帖和熱度值的勝利。此或反映在社交媒體中，不論傳統或網絡媒體，都需要適應遊戲規則，以影片和圖片發佈才能取得較佳網民互動度。然而未免可惜的是，以文字為主的媒體較難突圍而出。而除 Twitter 平台外，連結的互動表現不佳，在互動率影響曝光度的社交平台生態中，媒體亦變相較難從社交平台為其網站導流。

總結而言，本文為展現香港傳媒網絡化及社交媒體化全貌進行了梳理

和分析。香港傳媒的網絡化，尤其是與社交媒體的融合，不僅體現於傳媒在網絡平台上的覆蓋層面，也反映了傳媒內容為適應社交媒體傳播特點所做的調整上。而分析發現軟性新聞內容相較於嚴肅新聞在社交媒體平台上的濫觴，則啟發我們對於社交網絡平台對不同類型新聞傳播效果的影響，以及各平台用戶的新聞閱讀偏好進行進一步的思考。

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● 第七章

從觀望到改變：
香港媒體如何應對智能科技

閻丘露薇、王小輝





在我們這份研究報告中，可以看到一些媒體管理層的擔憂。除了因為香港媒體市場相對小，擔心科技投入無法產生效益之外，另外一個原因，在於他們並沒有認識到智能科技對於提升整體新聞質量帶來的好處。優質的資訊對於一個開放型的社會以及民主至關重要。

從智能科技在新聞媒體的應用來說，可以幫助媒體面對幾個急需解決的問題：一、互聯網時代，公眾面對大量資訊，往往會造成困惑，沒有意識也沒有能力去區分資訊真偽，這也是假新聞及不實資訊快速和大規模傳播的原因之一。對於新聞媒體來說，這個時候更需要承擔起社會和職業責任，快速有效地甄別資訊，確定資訊來源，成為公眾可以依賴的事實核查的來源；二、在受眾對於媒體的信任度下降的情況下，透過智能科技的幫

助，可以提供高質量的新聞內容，從而提升新聞媒體本身的公信力。

雖然在全球範圍內，一些新聞媒體開始在新聞內容生產中使用人工智能技術，但是事實證明，有意義和有深度的新聞報道，並不能夠被人工智能替代，即使是數據處理，也需要有經驗和相關技能的記者的主導。在新聞內容生產上，即使可以透過機器人撰寫新聞稿件，但到目前為止，只集中在簡單的事實提供的稿件上，比如財經資訊、天氣預報等。但是人工智能可以大大減少重複工作，提升新聞編輯室的效率。在調查新聞報道中，人工智能處理數據的速度，也可以提升完成調查報道的速度。

在內容分發上，人工智能可以針對不同用戶，透過演算法進行的訂製服務，更有效地黏合讀者，更重要的是，同時為個人及社區提供相關資訊，從而為個人決策和社區公共討論提供優質服務。公眾有管道獲取準確的資訊，是一個社會民主進程的基本要素，而媒體一直以來是一個重要持份者。

目前在全球範圍內，歐美的新聞媒體在使用智能科技方面進行了很多嘗試，大致可以分為兩個層面。首先是在內容生產過程中，透過人工智能及機器學習，在新聞來源的檢索過程中，減低記者及編輯工作的重複性及勞動強度。其次是在內容分發。

一直以來，不斷發展的智能科技在改變新聞界。人工智能這個概念，可以追溯到上世紀五十年代，在過去幾十年內，相關的定義也在不斷改變。但是一直都有一個共識，那就是人工智能科技是一種最終需要人類智慧的電腦科技。

在新聞業的不同工作流程中，電腦科技在過去一直提供協助，包括從新聞採集、組織管理到資料分析，從自動生產新聞內容到作為個人助理，甚至包括對受眾的內容分發。根據路透社針對歐美媒體的調查報告，大約百分之七十五的新聞機構已經不同程度地使用了人工智能科技。

表 7.1 人工智能在新聞業的運用

	新聞採集	內容處理		內容分發	受眾聯繫
情況描述	透過文件和數據處理發現新聞線索 為新聞調查進行數據處理	在財經 / 體育 / 天氣 / 危機新聞報道中運用機器人寫作 為編輯部提供新聞選題，事實核查，避免假新聞		透過新的分發方式推送新聞內容，比如語音設備，以及新聞編輯室的其他情境功能	跟蹤受眾在社交媒體上的反饋，利用 chatbot 實現人機對話，觀測受眾留言 個性化內容訂製 app，為受眾提供度身訂造的內容服務
AI 技術運用	透過機器學習及自然語言處理來進行數據分析	自然語言搜集 知識可視化		數碼化私人助理（自然語言理解；文字語音轉化） 機器學習形成的工作流程	自然語言處理 新聞推送 新聞推薦
案例	[ProPublica 和 谷歌新聞實驗室] Documenting Hate News Index [BBC 新聞] Juicer [美聯社] RADAR	[華盛頓郵報] Heliograf; [騰訊] DreamWriter [雅虎!] Wordsmith [紐約時報] Editor		[谷歌 home] 語音新聞配送 [The weather Channel] 混合現實情境新聞報道	[紐約時報] Readerscope; [今日頭條]，[谷歌]， [Facebook] 新聞推送

新聞檢索。比如 BBC 在新聞編輯室中使用的名為 Juicer 的檢索工具，可以從全球 850 個媒體的 RSS 輸出新聞稿中，將來源於 BBC 的所有稿件區分出來，然後將剩餘稿件，按照新聞機構、地點、人物及事件等進行歸類，貼上標籤。這樣的話，當記者在採寫新聞稿件時，可以迅速地透過這個工具，從全球所有網站中搜索到相關聯新聞。

事實核查。對於編輯來說，核實記者及編輯的稿件是非常重要，也是負擔很重的工作。透過智能科技，可以簡化編輯進行資訊來源核查的程序，提高速度。《紐約時報》透過人工智能技術，將所有文章中的重點詞標籤化。當編輯進行搜索時，只需要提供事件、人物或者地點等類別，系統會提供相關資訊，使得核查步驟更加簡單、迅速和準確。

追蹤熱點。智能科技可以取代原本需要人手操作的搜索新聞工作，比如搜取在各類社交媒體上點擊量最高的新聞報道，甚至預判哪些稿件或者

話題將會成為熱點。美聯社透過使用 NewsWhip，蒐集競爭對手在所有社交媒體平台上發佈的新聞；如何與他們的受眾在社交媒體上互動；受眾的投入程度；並且發現是哪些社交媒體意見領袖在這些新聞的傳播途徑中起到關鍵作用。

提供新聞線索。智能科技透過分析編輯和記者在人工情況下無法處理的大數據，從而發現存在的一些模式，或者是不同尋常的現象，從而為新聞媒體提供可能值得進行調查的新聞線索。BuzzFeed 利用演算法，將公開資訊中的飛行航線進行處理之後，發現了一些航線存在不同尋常的情況。在經過記者的深入調查之後，發現了政府使用間諜機進行監控的問題。目前路透社開始使用名為 Lynx Insight 的工具，實行編輯室內的人機合作。

機器負責處理數據，發現模式和不尋常，編輯則決定這些發現是否重要。

內容管理。用戶生產內容，比如留言及論壇討論，一方面提供了更多的資訊來源，也增強了受眾和媒體之間的黏合度，但是另一方面，如何管理其中的仇恨和違法言論，是很多媒體需要面對的現實問題。不少機構會組成專門的隊伍，來進行網上留言的管理和清理，但在互動踴躍的情況下，人手管理無法兼顧所有留言。智能科技可以幫助媒體減輕負擔，透過關鍵詞及語義情緒分析來管理留言。《紐約時報》目前使用的 Perspective API 工具，為留言打分，而受眾可以根據自己的喜好來選擇想要看到的留言，這正是透過智能科技來降低成本，同時提升用戶討論質量的一個嘗試。

機器寫作。很多媒體開始使用智能科技寫作新聞，這也被稱為 robot journalism，比如《華盛頓郵報》使用的 Heliograf，Yahoo! 使用的 Wordsmith，美聯社使用的 Reporters and Data and Robots (RADAR) 等。這些機器寫作主要集中在體育、財經及天氣預報，這是因為這些新聞稿件的寫作有一定的格式，通常需要的只是更新數據，對於大部分記者來說，相當於重複勞動，透過使用機器，則提高了稿件更新的速度，同時釋放了相關記者和編輯，可以從事更有深度的工作。

數據可視化。將數據透過各種圖表，連結相關資訊進行展示，是在數碼時代讓媒體能夠將複雜豐富的資料用一種更有效的方式展現給受眾。受眾只需要按一個鍵，就可以獲取自己想要的資訊，從財經、政治，到娛樂。目前市場上有不少免費的公開資源，提供給新聞媒體進行數據可視化展示，而其中專門針對新聞媒體的，則有路透社和科技公司合作推出的 Reuters Connect。

機器主播。雖然到目前為止，機器主播依然需要依靠人手來處理新聞內容，但科學家們的目標，是未來可以透過智能科技，讓機器主播可以和

人類一起主持直播節目。透過智能科技，機器主播可以快速處理和分析大量數據，可以用不同語言和世界各地的嘉賓對話，而且可以二十四小時不停歇的工作。

相對智能科技參與新聞內容生產過程還在試行和嘗試階段，在新聞媒體的內容分發以及媒體消費上，智能科技的採用已經比較廣泛，也相對比較成熟。

內容訂製推送。和 Facebook newsfeeds 類似，新聞機構為用戶提供個性化服務，根據用戶過往的瀏覽歷史、地理位置、性別、每天在網絡上花費的時間以及在網絡上發言的次數等，透過演算法，制定針對每一個用戶的內容推送服務。一家英國公司 Newsroom AI 宣稱，經過十個月和多家新聞媒體合作的測試，發現在使用了這個工具之後，使用者在頁面上停留的時間增加了四倍，而且也讓新聞媒體可以在後台獲取使用者在不同的文章和頁面上停留和瀏覽的資料。

人機對話功能。Chatbot 可以讓用戶透過聊天室留言以及其他管道和新聞媒體進行互動。Quartz 的受眾，可以透過 BotStudio，輸入和新聞有關的問題，比如時間、地點或者人物等，app 會提供被認為受眾有可能有興趣的相關新聞。Guardian 也在 Facebook Messenger 上推出了 Chatbot。比如只要透過人機對話預定新聞提要，記者們就會進行撰寫，並且在第二天進行推送。而輸入「頭條」之後，當天最熱門的五條新聞就會被推送到使用者手機上。

對於新聞界來說，人工智能帶來的影響，可能和過去二十年其他科技，如網絡平台、社交媒體、數碼工具等帶來的影響一樣重大。雖然人工智能會帶來變化，但是並不會取代記者的工作，而是加強。人工智能需要人類的輸入，需要有技能的記者去核實和解讀人工智能得出的結果。雖然人工

智能會增加內容生產的數量，但是並不一定提升質量。綜合以上的這些趨勢，我們認為香港的新聞媒體可以利用智能科技進行以下嘗試：

- 追蹤突發新聞，替代傳統人工守候方式
- 發掘社交媒體話題熱點，提升議程設置能力
- 協助新聞核查，偵測假新聞
- 數據可視化，方便讀者理解相關資訊
- 用戶內容訂製和推廣，增加黏合度
- 人機對話頁面功能，提升互動功能

隨着電腦的出現，新聞記者一直都有利用數碼科技來輔助報道，目標是透過演算法、數據，以及社會科學的方法，來提升新聞的公信力。現在隨着智能科技的發展，透過人機互動，利用科技更能提升報道質量和數量，可以為公眾提供一個值得信賴的資訊源，同時增加受眾對媒體的認同。這需要懂得使用數據、處理數據，從而發現值得報道的新聞的記者和編輯。但我們發現，香港新聞媒體並沒有能夠投入資源，為現有的記者和編輯提供相關的培訓。事實上，透過培訓，掌握一些基本的使用各類免費數據處理軟件的技能，對於記者和編輯來說，將會有事倍功半的效果。使用新的科技工具，並不意味着否定傳統的新聞採編的流程，最終的新聞產品，依然遵循原有的新聞標準，但是因為這些新的工具，讓新聞採編有了不斷增加的新方式。

對於現有記者和編輯的培訓，香港媒體可以加強和本地大學新聞學院的合作。以香港浸會大學為例，傳理學院開設了全港第一個將新聞傳播以及計算機合而為一的學科，目標是為媒體培養和輸送適應科技發展的人才，

同時也有能力為媒體提供相關技能培訓。在新聞部現有的員工架構上，媒體管理層可以有意識地加強技術人員和採編人員的互動和合作，讓雙方透過各自所長，生產更有深度，同時更受讀者歡迎的內容。

新聞資訊質量的提升，新聞媒體的健康運轉，離不開受眾。一個社會只有擁有了具備足夠媒介素養的受眾，才能促進高質量內容的生產，因為人們懂得媒體的重要性，同時願意為高質量的新聞產品付費。公眾媒介素養的提升，需要政府的介入，透過從小學開始的系統媒介素養教育，讓公民擁有辨別資訊真偽的能力。而身為公立大學，擁有教育公眾的責任，在這一點上，需要和媒體進行合作，透過媒體平台，提升公眾意識。

一些媒體管理層提出擔憂，比如數據收集和處理過程中產生的隱私問題，事實上，智能科技帶來的問題遠遠不止這個。比如利用演算法導致的內容生產過於考慮點擊率，演算法設計本身具有的偏見，從而導致資訊流動的不公平，以及人類在目前到底對於機器的信任程度可以有多高等等，這些都是在使用智能科技過程中不可忽視的倫理問題。

圍繞智能科技的發展和應用，目前確實有很多爭議，因此提升公眾對於這項科技的了解，增加科技的透明度相當重要。在這一點上，公眾必須要依靠記者、新聞媒體來理解相關科技如何被使用，以及可能產生的問題。科技從來都是中立的，關鍵是如何使用。正如利用科技可以製造各類虛假資訊，導致公眾對新聞媒體失去信心，甚至對社會的民主化造成壓力，但同樣利用科技，可以為公民賦能，包括記者，也包括新聞媒體。

從新聞行業的發展來看，能夠取得可持續發展的新聞媒體，並不是那些為了降低成本，利用科技替代編輯和記者，而是那些懂得如何利用科技來協助編輯和記者更好、更高效地進行工作，提升新聞產品品質。雖然隨着智能科技的發展和運用，會對新聞媒體的架構、人員配置、內容生產流

程產生影響，但是新聞標準，以及對優秀記者和編輯的需求，並不會因此產生改變。不管是對人還是對技術，最終的目標，是生產和受眾以及社會相關的高品質新聞。

我們希望，我們的這份報告，可以完整展現香港媒體在數據時代的現狀、面臨的問題和挑戰，當然，還有機遇。我們希望，我們的建議，可以為未來香港媒體的進一步發展，繼續在社會變革中承擔應有的責任，提供一些方向。

（閻丘露薇 香港浸會大學傳理學院新聞系助理教授， 王小輝 香港浸會大學傳理學院新聞系研究助理教授）

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Chapter 1

Introduction

Raymond Li
Huang Yu





**“It was the best of times,
it was the worst of times...”**

- Charles Dickens, *A Tale of Two Cities*

This quotation, written by the famous British novelist and journalist in the 19th century, aptly portrays the development of the media industry in the 21st century.

First, the emergence of internet technology in the late 20th century led to an unprecedented revolution in the media industry. Then came the subsequent emergence of social media in the first decade of the new century, completely changing the relationship between the media and the public; the media lost the monopoly it had had on news dissemination, while the public, once only receivers of information, gained a new ability to also put out information and participate in content production. And now we are embarking on what promises to bring the biggest changes of all.

The impact of artificial intelligence

Today, the rapid rise of artificial intelligence (AI), based on deep neural networks combined with cloud computing, big data and mobile

internet technology, is not only changing the information dissemination order again, but also bringing about subversive transformation and rebirth to the whole media industry.

As “the foundation of news innovation” (Powers, M., 2012), AI and its close relation big data are making major international media undergo a “quantitative turn” (Petre, 2013), entering the field of data news one after another. In March 2009, *The Guardian* established the world’s first data news department. In December 2012, the *New York Times* launched a collection of text, audio, video, animation and digital model (DEM), and in the spring of 2014, it launched the “Up Shot” column that is also focusing on date news. In the same year, the BBC set up its “News Lab” to drive news innovation, as well as implementing the test of Open Media data acquisition and editing system and put it into practice in 2016. Later, the Chinese language website of the *Financial Times* opened a data news column and the Cai Xin Media in China also set up a data visualisation laboratory.

With these rapid changes in technology, more and more media use data visualisation tools, augmented reality (AR), virtual reality (VR) and other developments to report news. They not only personalise the means of dissemination and make content interesting and interactive, they bring a more colourful information world to the public. The news customisation model based on algorithms has brought about other great changes in the distribution of information. By analysing users’ browsing behaviour data, AI can more accurately deliver personalized content to different groups of news audiences.

In recent years, the world’s major media have developed “robot journalism” or “automated journalism”, systems that compile news reports

by quickly collecting, processing and collating large amounts of data and then presenting them according to the formula. Such stories are now widely seen in financial information and sports news. The Associated Press (AP) uses Wordsmith, an AI robot news editing software designed by US Automated Insights, to cover quarterly earnings reports for listed companies. During the Rio Olympics in 2016, a robot developed by *China's Toutiao* news aggregator produced more than 450 sports news stories in 16 days by writing and publishing them almost simultaneously with the live TV broadcast. On August 8, 2017, a robot belonging to the China Seismological Network reported on the earthquake in Jiuzhaigou, Sichuan Province, completing the whole process from writing to distribution in only 25 seconds, allowing readers to keep up with the situation almost in real time. Compared with the traditional reporters, robots can instantly pick out the next hot information for their news composition and push it out to the audience on the basis of clicks showing activity on the internet.

According to “News, Media and Technology Trends and Forecasts 2018”, published in January 2018 by the Reuters Institute for the Study of Journalism at Oxford University, almost three-quarters (72%) of nearly 80 media agency heads, editors and technical directors from 29 countries and regions around the world said, they planned to actively experiment with AI in the coming year to support better content recommendations and to drive greater production efficiency, including the use of “robot journalism”.

At the same time, the impact of AI technology on the news media industry is challenging and questioning the values of professional journalism. AI will only judge the hot values of news and the selection, production and distribution of the chosen content according to readers' click-through rates, but it will not select and produce information from the

professional perspective of adhering to the news as a “social public tool”, as human journalists can do.

The current media market situation in Hong Kong

Hong Kong has one of the most competitive media markets in the world. Although the population is only 7.4 million, there are 68 newspapers, including 37 in Chinese and 13 in English newspapers, 607 periodicals, three local free TV stations, two local pay TV stations, 15 non-local TV stations, a public broadcaster and two commercial radio stations (at the end of 2017; Hong Kong Yearbook 2018). There are also many internet media organisations in Hong Kong, but the actual numbers are hard to estimate.¹

Hong Kong is also the regional base for many international media organisations, including AFP, Bloomberg News, Dow Jones, Thomson Reuters, *New York Times*, *Financial Times*, *Japan Economic News* and *Wall Street Journal*, while international broadcasters with studios in Hong Kong include the BBC, Channel NewsAsia CNBC, CNN and Phoenix TV.²

Hong Kong's telecommunications industry is among the world's top ranked. According to the Hong Kong Government's *Hong Kong Yearbook 2018*, by the end of 2017, more than 92% of residents used broadband and the mobile phone penetration rate was 248%, meaning there are nearly 2.5

1 *Hong Kong Yearbook 2018*, p. 270

2 *Hong Kong Yearbook 2018*, p. 271

mobile phones for each Hong Kong person.³

Given this advanced digital environment, some media organisations in Hong Kong have made a start on applying new technologies. Initium Media founded in 2015, is at the forefront of data visualisation, and its special-purpose media design department is constantly exploring new ways to tell stories through the production of interactive news albums, interactive infographics, data news, news games, video stories, mini-tests, animation, and so on. A report by the *South China Morning Post* on the government budget and another by the Visual Laboratory of Financial News Materials on China's property market in 2016 are also examples of successful data visualisation news presentation.

However, the rapid development of new technology in recent years has also had a considerable impact on the industry in Hong Kong, with a number of media organisations closing down, including Hong Kong Daily News, ATV (later moved to an online platform), DBC, *The Sun*, *Cheng Ming* and *Sudden Weekly*. Several magazines, including *Next Magazine* and *TVB Television Weekly*, have also terminated their hard copy print run and instead only make content available online.

3 *Hong Kong Yearbook 2018*, p. 279

Summary

Colleagues and students of the School of Communication at Hong Kong Baptist University, together with outside consultants, have spent six months conducting research and jointly writing the *Hong Kong Digital Media Report 2018*.

The report discusses the media's digital transformation from four perspectives: markets and audience, content production, business operation and technology platforms. We have tried to look into how much the consumption behaviour of Hong Kong media users has changed with the rapid adoption of new media technology, how Hong Kong media leaders have responded to changes in technology and audience, what changes have taken place in the content production process for media practitioners, how Hong Kong media have performed in using new technology, and how changes in the media industry have affected Hong Kong's media education.

The report contains six chapters besides this one.

In the 2nd Chapter, "User survey of Hong Kong digital media", the authors describe the results of telephone interviews with 1,000 Hong Kong residents aged 18 or over in June and July 2018. The questions mainly focused on three points: respondents' news contact and consumption habits, the public's understanding of and familiarity with new technologies, and the public's trust in Hong Kong's news media. The responses are summarised and analysed and some observations are made.

Chapter 3, "Personal interviews with Hong Kong media chiefs", recounts the views of 12 media chiefs in Hong Kong, both from the traditional media such as newspapers, magazines, radio and television in Hong Kong, and from digital media. The interviewees were asked to

address three major issues: how much impact new media technology has had on their organisations, the measures they've taken to deal with the technology, and how they formulate their long-term digital development strategy.

The 4th Chapter, "Survey of content production in Hong Kong news media", describes the results of an online questionnaire filled in by 225 practitioners involved in all aspects of news production, including front-line reporters, editors and news content designers, as well as programmers in charge of data collection and visualisation. The scope of the investigation includes the way Hong Kong journalists plan news stories, the way they find news stories and data sources, and the way news stories are presented.

Chapters 5 and 6, "Survey on the use of digital media technology platforms in Hong Kong" and "Analysis of the current situation of social media in Hong Kong", give accounts of studies that used content analysis to observe and analyse digital platforms owned by Hong Kong news media organisations and third-party digital platforms. In all, 87 media in Hong Kong were included, 40 traditional media using digital platforms and 47 native digital media. Data was collected manually as well as via the front-end code of websites using JavaScript browser language to automate content collection.

In the 7th Chapter, "From observers to change makers: how Hong Kong's news media are adapting to artificial intelligence and machine learning", the writers describe the latest developments in the application of intelligent technologies such as artificial intelligence in the global media industry, noting that journalists are still very much needed to produce news, especially in the case of in-depth reporting. In addition, the authors

put forward several suggestions on the future of artificial intelligence applications in the media industry in Hong Kong.

During the research and writing of the report, we received guidance, support and assistance from senior executives and practitioners in the Hong Kong media industry, as well as from colleagues in the School. We take this opportunity to express our heartfelt thanks to you.

We hope that this report can play a role in attracting more attention to the digital development of Hong Kong's media industry. At the same time, we also look forward to comments and feedback too.

(Raymond Li, Director, Institute for Journalism and Society, HKBU;
Huang Yu, Professor, School of Communication, HKBU)



Chapter 2

User Survey of Hong Kong Digital Media

Huang Lei
Zhang Yin





In this section, we focus on the users of digital news media in Hong Kong. The report has three parts, namely, news exposure and consumption, familiarity with and recognition of new technologies, and media credibility. The findings of this section are based on data from a random sample survey conducted in June and July 2018. The respondents were all Hong Kong residents over 18 years old.

In this report, we adopt the term “users” instead of “audience” to refer to people who consume media on the grounds that “users” covers not only audiences of various types of traditional media (e.g., newspaper, TV, and radio) but also those who look to new media (e.g., news websites, social media, independent/alternative media) for news and information. We believe the term “users” covers all information access activities in a digital media environment. Digital media users exhibit high autonomy, high activeness and high interactivity.

We define social media broadly as platforms that enable the production of user-generated content and facilitate user interaction. Examples of social media are social network sites, smartphone applications, online forums/communities and blogs. Popular social media platforms in Hong Kong include Facebook, Instagram, WhatsApp, Line, Snapchat, Hong Kong Discussion Forum and HKGolden.

Research methods and data representativeness

The research team commissioned Hong Kong University’s Public Opinion Programme to conduct a telephone survey in June and July 2018. The 1,000 randomly selected respondents were all Hong Kong residents aged 18 years or older. The sampling error is $\pm 3.1\%$ at a 95% confidence level, based on the 2017 year-end census total population figure of 7.41 million. To enhance representativeness, the figures presented below have been rim-weighted according to figures from the gender-age distribution of the Hong Kong population, the educational attainment (highest level attended) distribution and economic activity status distribution obtained from the Census and Statistics Department.

Executive summary of findings

- Ninety percent of Hong Kong residents are exposed to news on a daily basis.
- Traditional media remain a major source of information for Hong Kong residents.
- Approximately 45% of Hong Kong residents obtain news through

social media, with Facebook the most popular.

- Social media have become a major source of news but the level of trust in this kind of platform is relatively low.
- A majority of Hong Kong residents are passive media users. Over 60% of residents do not actively search for news. Over 80% of residents do not actively share or post news content.
- The older the Hong Kong resident, the less active they are in news searching.
- Middle-aged Hong Kong residents are most likely to share news.
- Ninety percent of Hong Kong residents do not pay for news.
- On traditional media, news about local society and international affairs receives most attention. On social media, news about local society and local politics receives most attention.
- Hong Kong residents have limited understanding and low recognition of information and communication technologies adopted by the news media in Hong Kong.
- *Apple Daily* is recognised as the most technologically innovative news media outlet by Hong Kong residents, and they are most familiar with its animated news.
- Generally speaking, residents’ level of trust in news sources in Hong Kong is low. Traditional media are the most trusted of news sources, although only 30% of residents expressed that trust.

Survey results

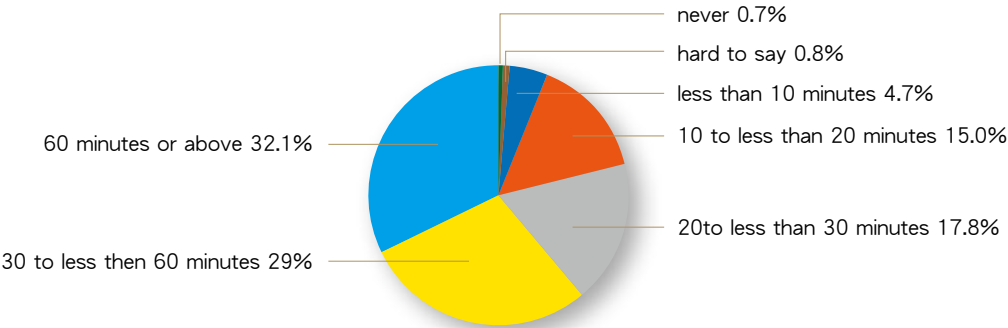
1. News exposure and consumption

This part of the report presents a general picture about Hong Kong residents’ exposure to news. We generated figures covering five aspects, namely: time spent on news exposure, news sources, news searching and sharing, paid news, and content preference.

a. Time spent on news exposure

Hong Kong has an information-rich and competitive media market. With a multitude of media options, easy access to news and information is a basic fact of life. Our survey suggests that a majority of Hong Kong residents obtain news every day through TV, newspapers and social media. Over 90% of Hong Kong residents spend at least half an hour per day on news exposure. Over 30% of Hong Kong residents spend one hour or more reading news.

Figure 2.1 Average time used to read news everyday (all news sources)



Further analysis of demographic differences in news exposure indicate the following:

1. Among those who have high news exposure (i.e., over one hour per day), there are more male users than female users (see Figure 2.2).
2. Young people (18 to 29 years old) spend relatively less time on news exposure, with more than half of this age group (52.7%) spending less than 30 minutes per day. Middle-aged (30 to 49 years old) and senior (50 years old or above) people spend more time on news than the younger cohort (see Figure 2.3).
3. Educational attainment has no significant impact on news exposure.
4. High income earners spend more time on daily news exposure (see Figure 2.4).

Figure 2.2 Average time used to read news everyday (by gender)

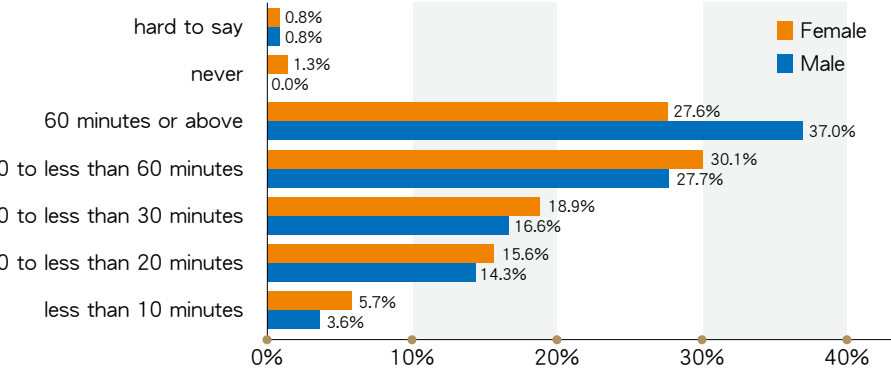


Figure 2.3 Average time used to read news everyday (by age)

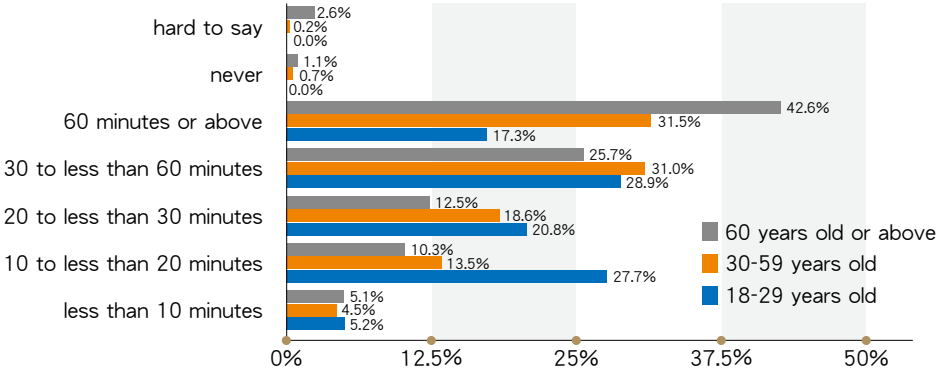
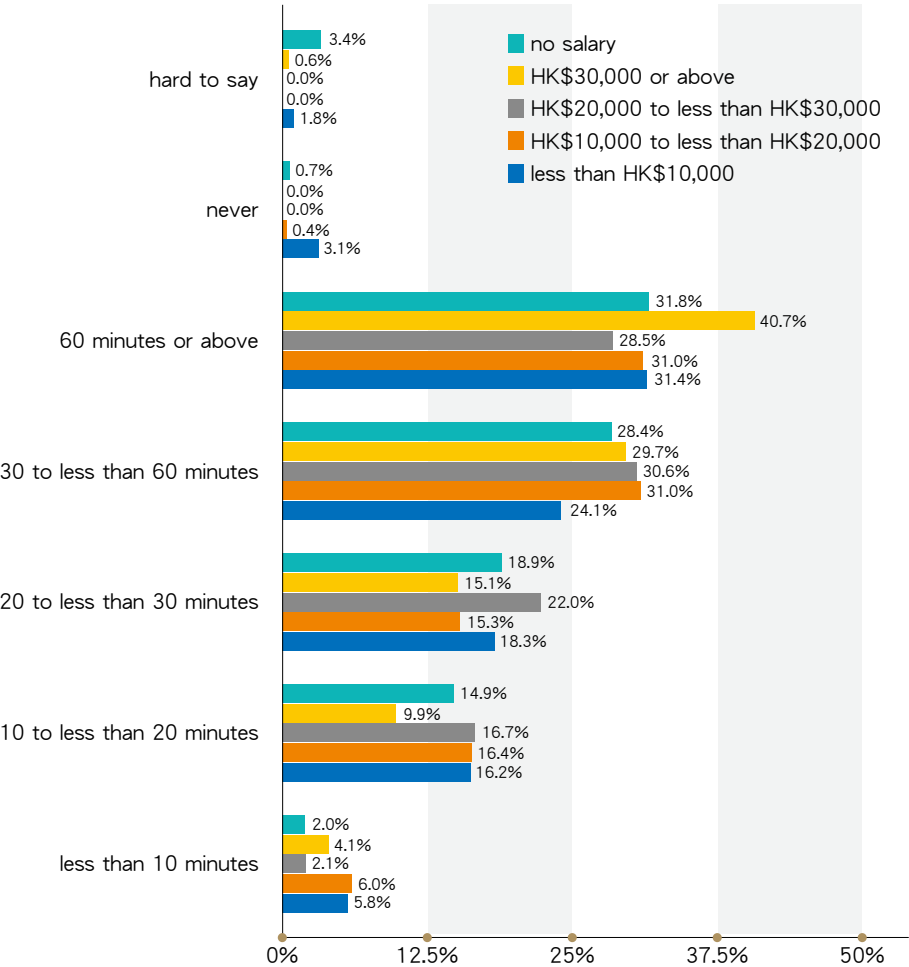


Figure 2.4 Average time used to read news everyday (by monthly salary)



b. News sources

The number 1 channel for getting news is TV. More than four-fifths – 84.7% – of Hong Kong residents usually or often get access to news by watching TV. Second in ranking are the digital versions of newspapers, through which 55.6% of Hong Kong residents read news. More than two-fifths – 40.4% – of residents still read print newspapers, and a similar proportion, almost 40%, get their news from radio.

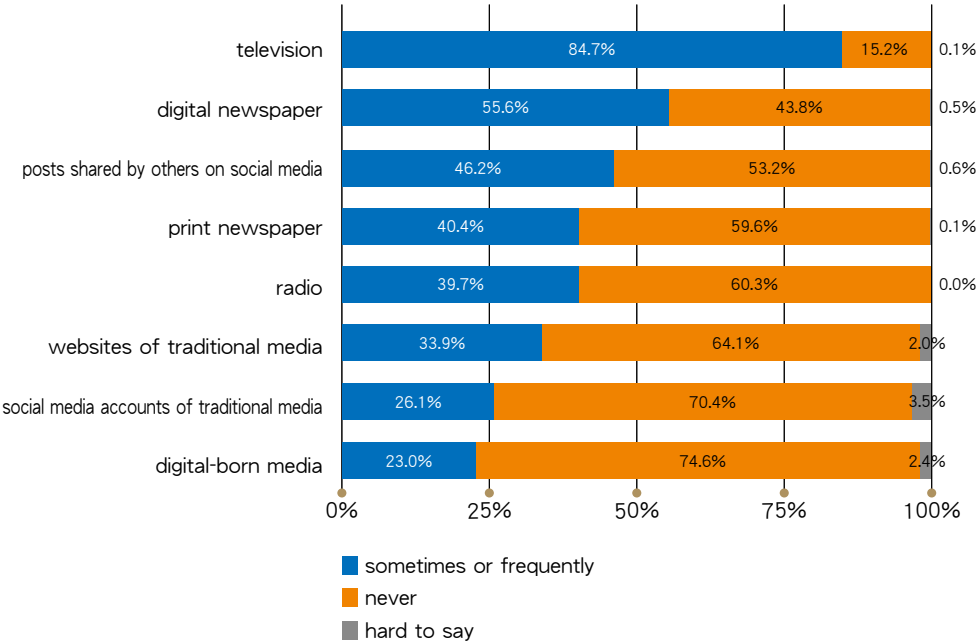
Hong Kong’s Internet penetration and personal computer adoption rates are equally high (Internet World Stats; Census and Statistics Department of Hong Kong Special Administrative Region, 2018). In recent years, the emergence and rapid development of digital-native media have left their mark on the city. However, according to the survey, the market share of digital-native media still has considerable room for expansion, with only about one fifth of Hong Kong residents using the new types of media to get their news.

Social media enable high user interaction as well as quick and wide diffusion of information, and are low cost for content production. This has altered communication processes at interpersonal, group and organisational levels. Social media have become important and influential sources of information and it seems that social media are changing their role from a complement to traditional media to a replacement of them.

The digitisation of news media has entered maturity in Hong Kong (Ma, Wong, & Hau, 2016). About one third (33.9%) of Hong Kong residents use the digital platforms of the traditional news media, and more than a quarter (26.1%) have at one time or another obtained news from the social media accounts of those news media.

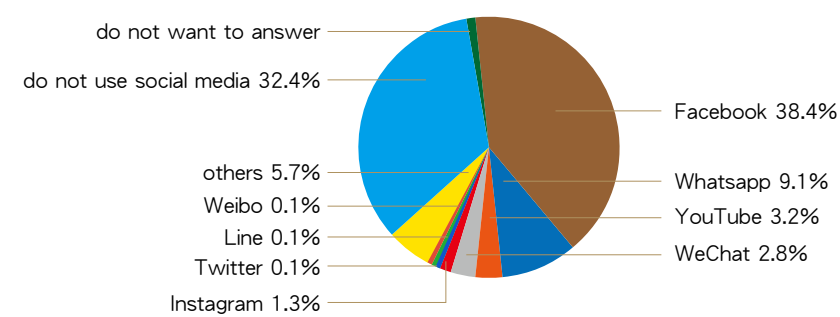
On social media platforms, besides the accounts/pages set up by the news media, more and more users obtain news from posts shared by other users. Nearly half – 46.2% – of Hong Kong residents get their news via content shared or posted by others on social media. This is the third most mentioned source of news for Hong Kong residents, the top two being TV (84.7%) and digital newspapers (55.6%).

Figure 2.5 Sources of news



Of all social media, Facebook is dominant in Hong Kong. Nearly two-fifths – 38.4% – of Hong Kong residents use Facebook to get news, followed by WhatsApp (9.1%) and YouTube (3.2%), the latter two platforms having significantly lower user bases. This finding is consistent with international trends (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018). However, Twitter is not a popular news source since only 0.1% of Hong Kong residents use this platform to get news (see Figure 2.6).

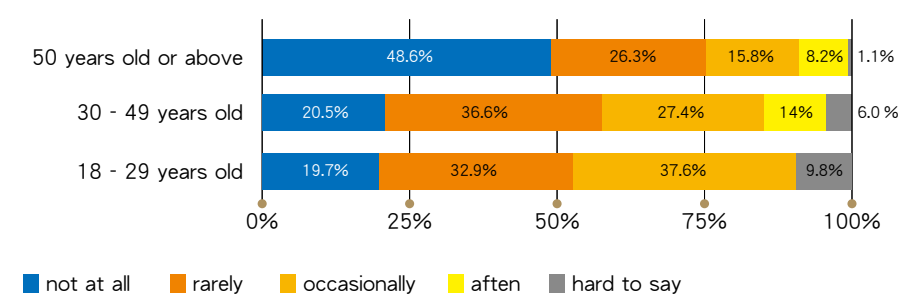
Figure 2.6 News access via social media



c. News searching and sharing

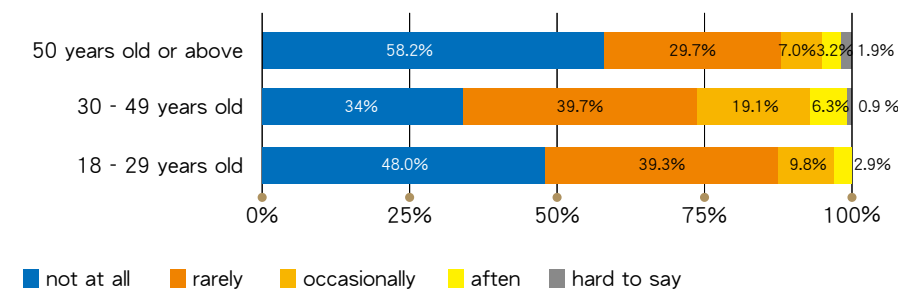
As digital media are more engaging, it is necessary to understand users’ news exposure patterns in terms of searching for information and sharing it on social media platforms. The results show, however, that a majority of Hong Kong people are passive users of news information. Over 60% of Hong Kong people rarely actively look for news information from the media (31.0%) or do not look at all (33.9%). Only 10.8% of residents reported that they frequently searched for news. A cohort effect has been found from our data, showing that the senior group (aged 50 or above) is the most passive in terms of searching out news (see Figure 2.7).

Figure 2.7 Frequency of news searching (by age)



Over 80% of Hong Kong people do not share or repost news information at all, while 48.1% never share or repost news information on social media at all and 34.8% rarely do. Comparing age groups, we found that middle-aged residents (30-49 years old) are relatively active media consumers, with 25.4% in this age group sometimes or frequently sharing or reposting news on social media (see Figure 2.8).

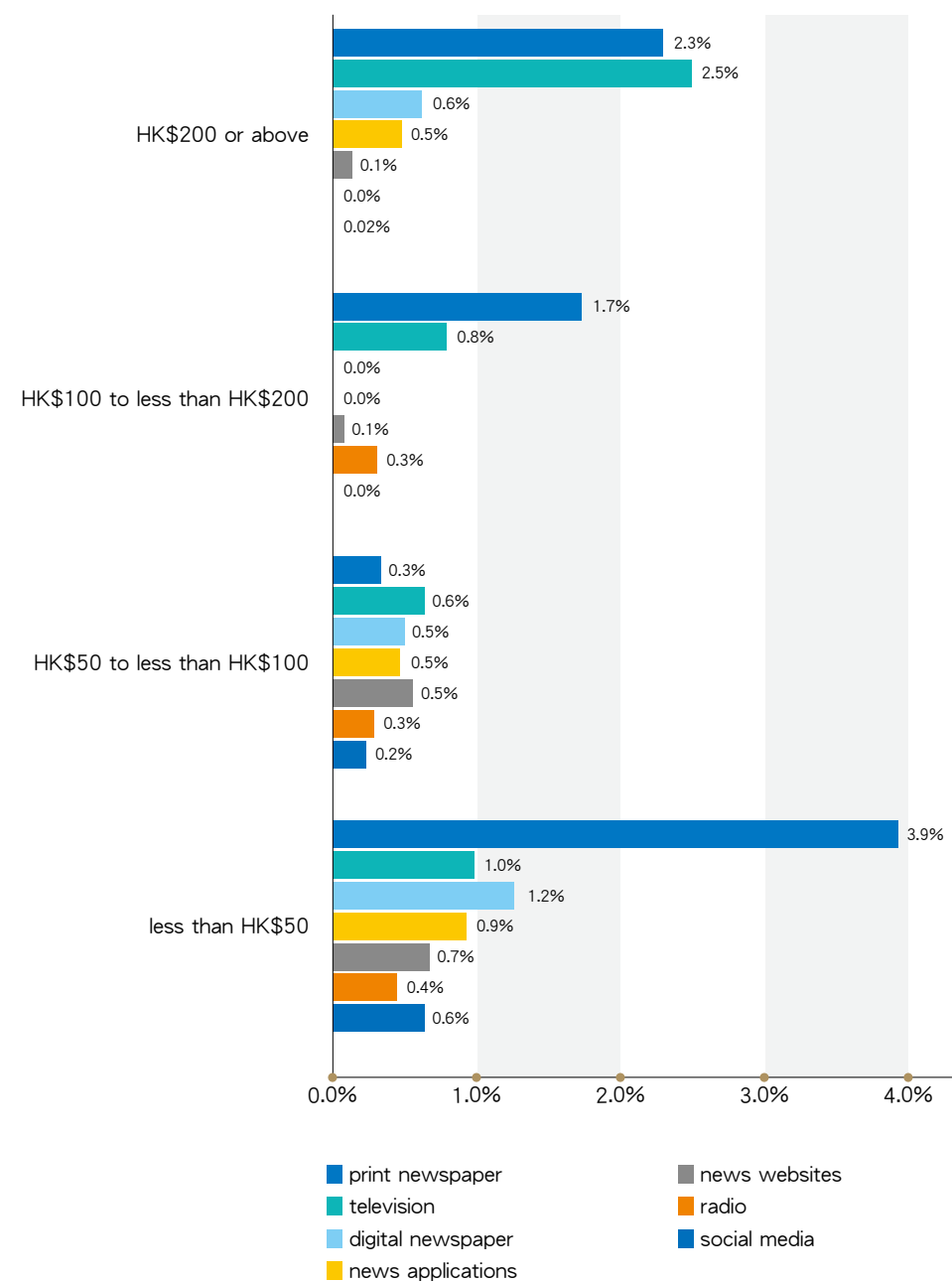
Figure 2.8 Frequency of news sharing (by age)



d. News payment

Media organisations have been exploring and renovating their business models in recent years to cope with the new digital environment, and

Figure 2.9 Paying for news



reader payment, once an important component of their revenue, is still sought. However, our survey shows that 87.4% of Hong Kong residents do not pay for news in any form. For those who do pay, most give their money to newspapers (10.5%) and TV (4.9%). Although these proportions are low, Hong Kong people are among the top in the world when it comes to payment: according to a recent study by the Reuters Institute and the University of Oxford (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018), Hong Kong ranks fourth in online news payment globally. Specifically, online news payment refers to online news content paid for through digital subscription, combined digital and print subscription, or per article or via a news app.

e. Content preferences

When using the traditional media, Hong Kong residents give most attention to local news (83%), followed by international news (71.1%), news about health and medicine (66.5%) and news about local politics (63.7%). On social media, news about local society and local politics receives most attention. Two thirds (66.7%) of residents said they paid attention to similar types of news on both social and traditional media.

Figure 2.10 News content preferences

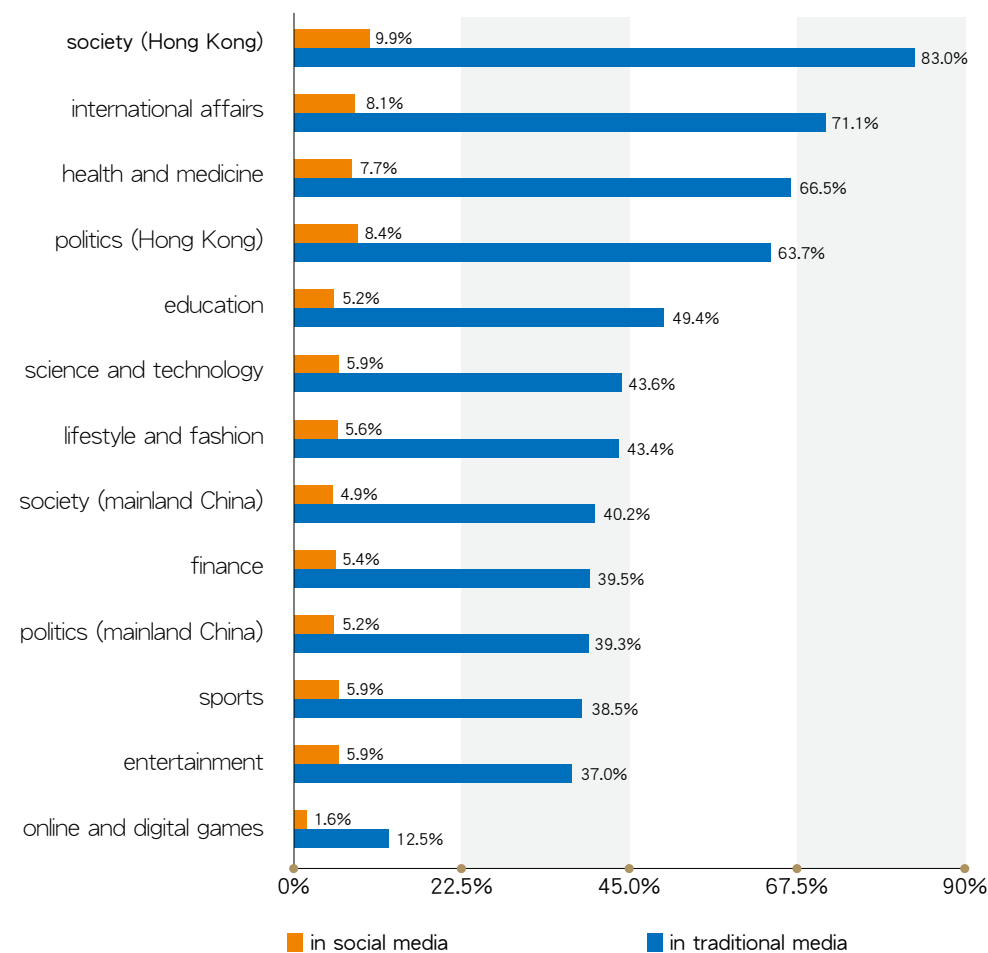
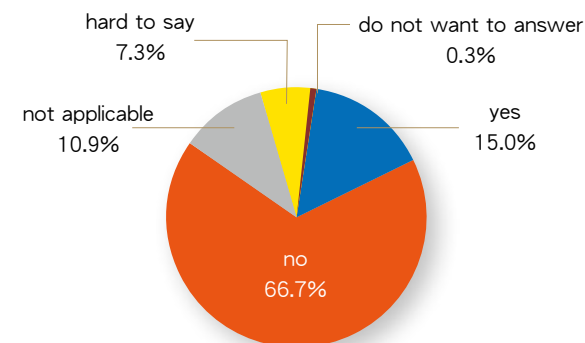


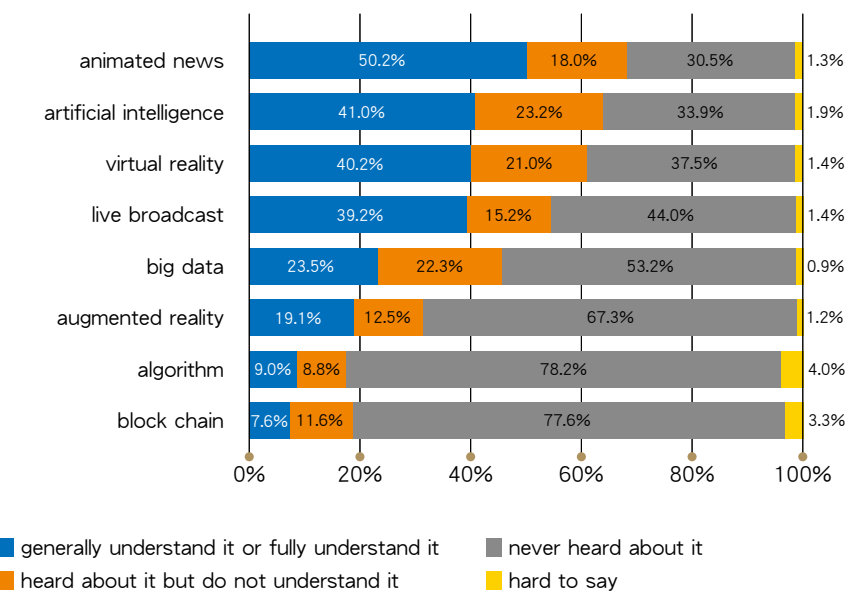
Figure 2.11 Are there any differences in preferences of content in traditional media and in social media?



2. Familiarity with and knowledge of new technologies

Recent years have witnessed the rapid development of information and communication technologies. As a major everyday information source, the media offer huge potential for facilitating their use. Media organisations in Hong Kong are adopting various kinds of new technologies in news production and distribution, although the pace has slowed in recent years. The most recognised of the technologies adopted, according to our survey, is animated news (i.e., using animation techniques to illustrate news stories, usually in melodramatic ways; Lo & Cheng, 2017), which half of the respondents (50.2%) say they are familiar with. However, they have little or no knowledge of algorithms, block chain technology or augmented reality (AR). According to the participants, the media organisation that has adopted most new technologies is *Apple Daily*, a traditional newspaper with a strong online presence.

Figure 2.12 Recognition of new technologies

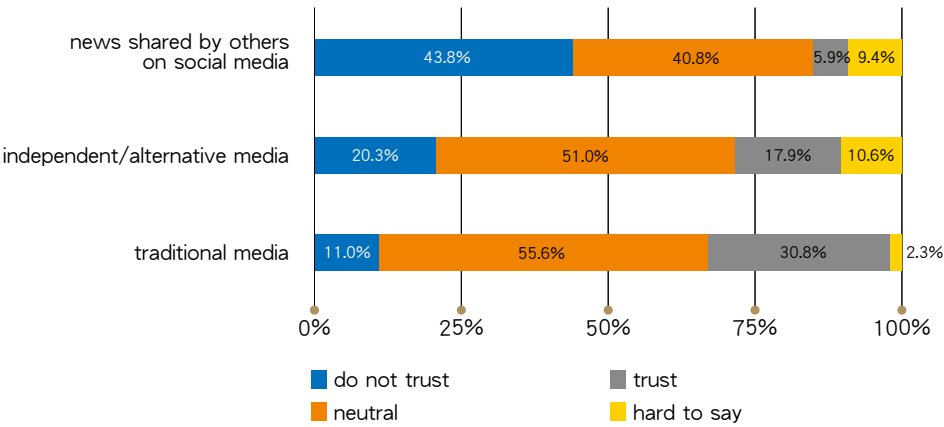


3. Media credibility

The benefits of the wide adoption of information and communication technologies (ICTs), especially social media, by news organisations and by users are not without countervailing drawbacks, such as fake news, misinformation and disinformation. As social media users can produce and share content with high autonomy and convenience, it is increasingly challenging for people to judge the authenticity and credibility of information.

In our survey, we asked media users about their trust in three different kinds of information sources: traditional media, independent/alternative media and content shared or posted by others. Results show that Hong Kong residents trust traditional media most, but the proportion is not high at only 30.5% . The least trusted news source is information or news shared or posted by other people on social media, with 43.9% not trusting this type of news source. Independent and alternative media are the second least trusted category, with 20.5% of respondents saying that they did not trust them. Many residents are actually not sure whether they trust news sources at all (56.0% for traditional media, 51.0% for independent/alternative media, 40.8% for news shared or posted by others).

Figure 2.13 Trust toward three major news sources



Further analysis of demographic differences in trust in news sources indicates the following:

- 1. No significant gender difference exists in trust across the three kinds of information sources, but the percentage of uncertain answers among female users is relatively higher.

Figure 2.14.1 Trust toward traditional media (by gender)

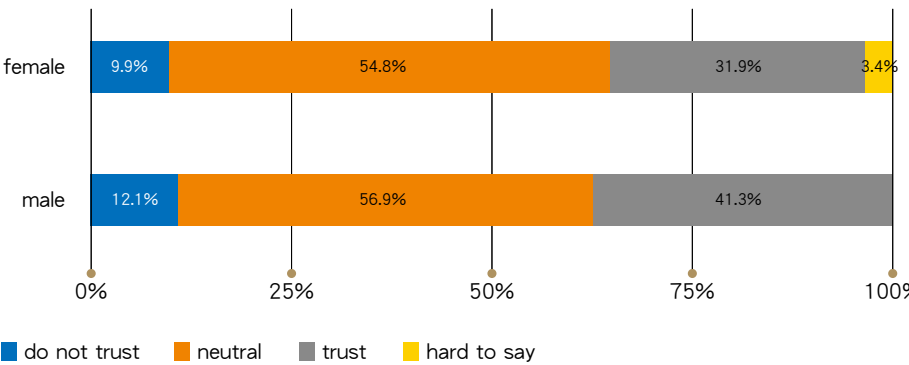


Figure 2.14.2 Trust toward independent/alternative media (by gender)

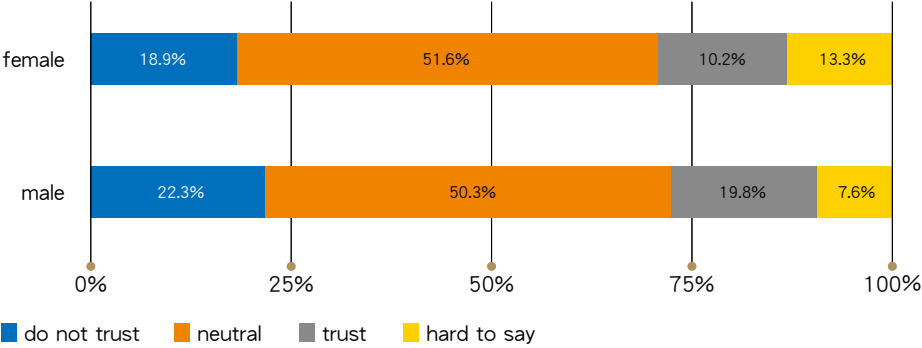
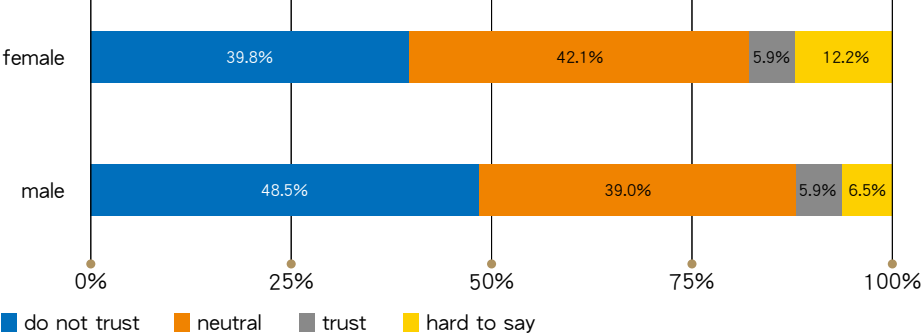


Figure 2.14.3 Trust toward news shared by others on social media (by gender)



2. As reported above, although young people (18 to 29 years old) spend relatively less time on news exposure, more young users tend to trust their news sources than the middle-aged and senior groups.

Figure 2.15.1 Trust toward traditional media (by age)

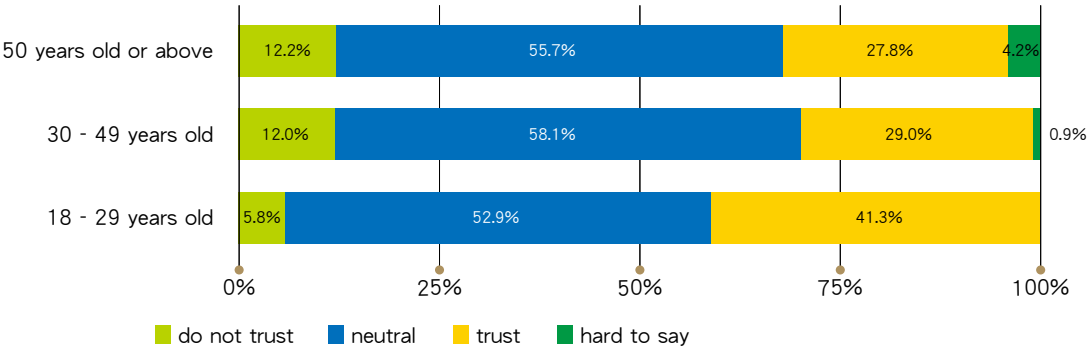


Figure 2.15.2 Trust toward independent/alternative media (by age)

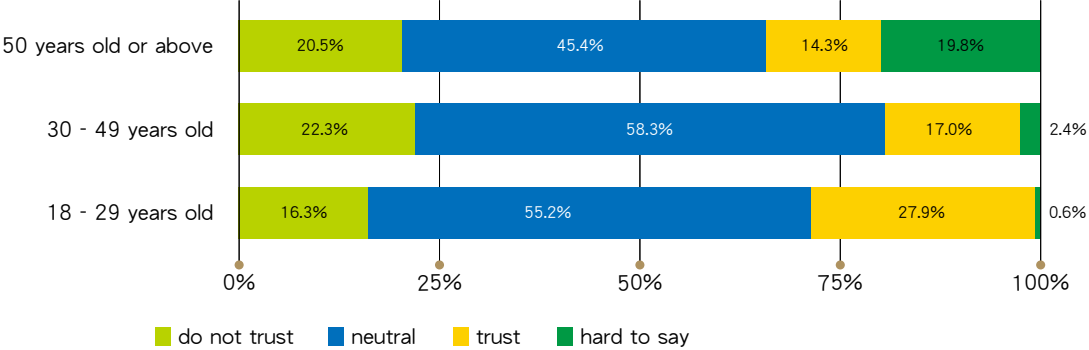
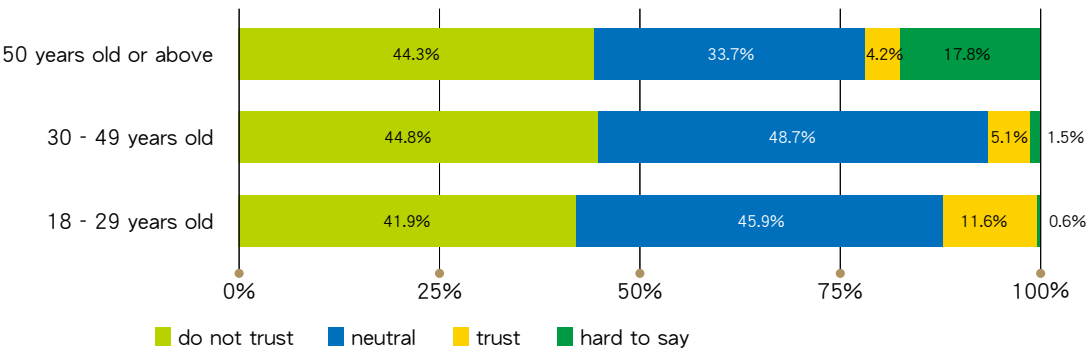


Figure 2.15.3 Trust toward news shared by others on social media (by age)



3. Users with a higher education background are more likely to indicate that they trust the news from traditional media (41.4%) and from independent/alternative media (23.1%), while users with lower education levels feel more uncertain about or hesitate to trust news from independent/alternative media (13.4%) and that shared or posted by other people on social media (13.1%).

Figure 2.16.1 Trust toward traditional media (by education level)

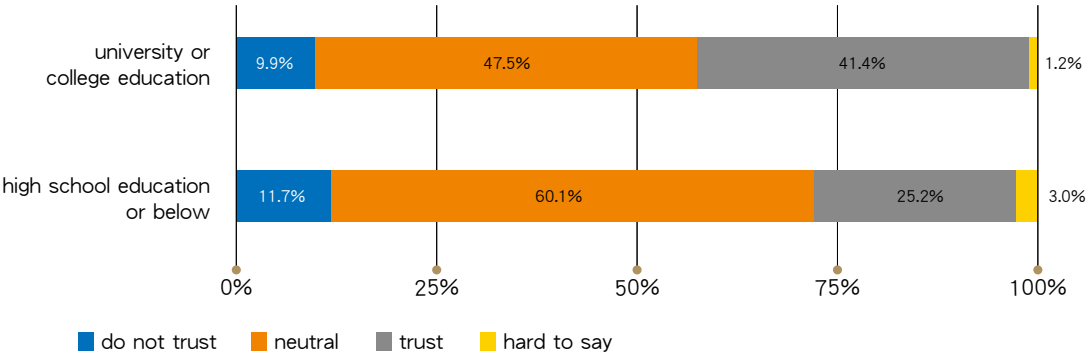


Figure 2.16.2 Trust toward independent/alternative media (by education level)

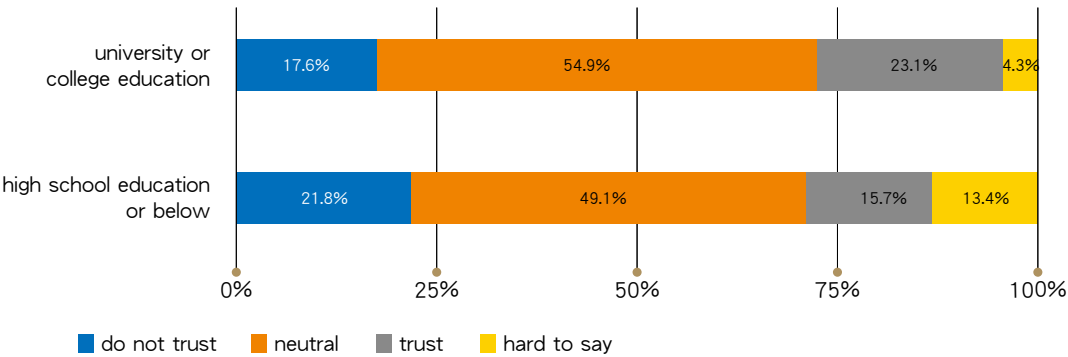
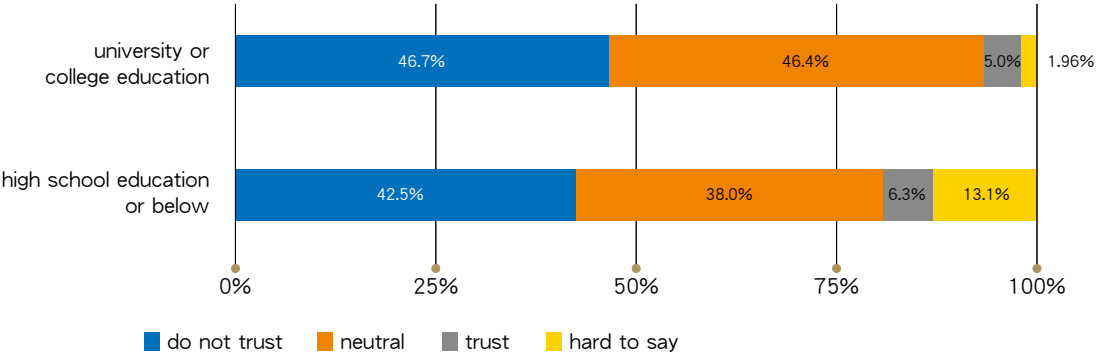


Figure 2.16.3 Trust toward news shared by others on social media (by education level)



4. More users with middle range or higher income tend to trust news and information from traditional media. More users with lower educational backgrounds feel uncertain about or hesitate to trust news from independent/alternative media or shared/posted by other people on social media.

Figure 2.17.1 Trust toward traditional media (by monthly salary)

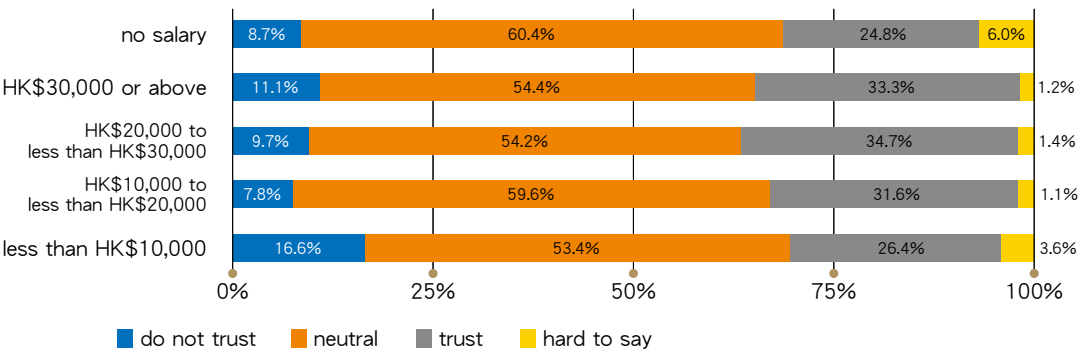


Figure 2.17.2 Trust toward independent/alternative media (by monthly salary)

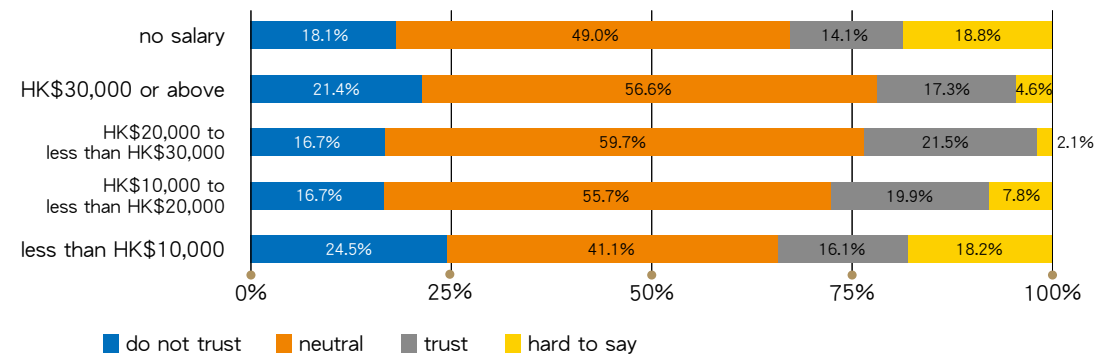
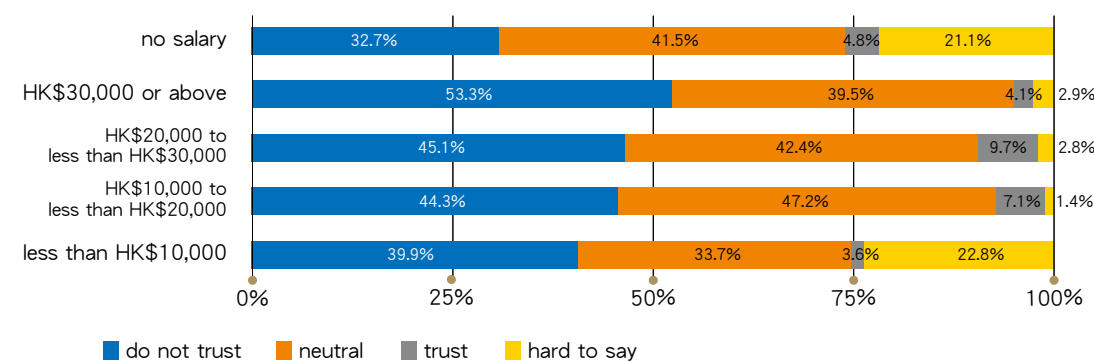


Figure 2.17.3 Trust toward news shared by others on social media (by monthly salary)



Conclusions and discussion

Thanks to the high Internet penetration rate and widespread adoption of smartphones in Hong Kong, getting news from digital media has become very common. With traditional media active in digitisation and the adoption of multiple platforms and technologies for news production and distribution, maintaining and improving content quality and credibility

ought to be an important item on their agenda for future development. For Hong Kong residents, traditional media remain the most trusted information source at the moment, even though the level of trust is modest. To achieve sustainable development, news credibility is the key in this ever-changing, complex digital media market. Social media companies should design tools to help users to evaluate news authenticity and develop interventions to improve news literacy. Enabling users to navigate the chaotic digital media environment and judge news authenticity should also become a top priority for social media companies in the future.

Most Hong Kong residents are passive media users. One of the implications of this finding is that news media can leverage their social media platforms or smartphone applications to better engage their audiences. Research has suggested that notifications from social media platforms or smartphone applications have become many users’ side doors to news and up-to-date information (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018). News media can act on this emerging mode of news exposure and push news to users.

Intention to pay for news is low, and news organisations are getting little income from their users. News media need to think about how to better engage them and cultivate their purchase intention in more innovative ways. Hong Kong residents have a limited understanding of new technologies. This is partly due to low adoption rates and partly due to low new media literacy. News media could take fuller advantage of such new technologies to enhance user experience and improve residents’ recognition and knowledge of these technologies. However, news media in Hong Kong have yet themselves to harness the power of innovative technologies. This is a promising area worthy of further exploration.

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Chapter 3

Personal Interviews with Hong Kong Media Chiefs

Raymond Li
Man Zifan





between 40 and 60 minutes. Questions focused on the following three issues:

- What is the status of Hong Kong media organisations in terms of digital development? How much impact has new media technology had on Hong Kong's media organisations, especially those from traditional platforms? How much impact has it had on the structure of the target audience, on the mode of content production and on the business model? Have these effects had positive or negative effects on media organisations? What are the specific influences and changes within media organisations?
- As key decision-makers, how have media chiefs in Hong Kong been responding to emerging platforms and technologies such as social media, big data, virtual reality and artificial intelligence? What specific measures have they been taking to digitise their media? Which areas in the industry have adopted new media technologies, and which are still dependent on traditional media technology? What changes have Hong Kong media chiefs carried out in terms of production processes, organisational structure and human resources?
- What is the best way to develop a digital development strategy to cope with the impact of media technology development on the market environment and on the business model of Hong Kong media organisations? Will Hong Kong media organisations increase their investment in digital media technologies? Will they also increase the number and proportion of technical staff as well as expand the roles of technical staff in content production? Do media organisations provide technical training for their employees? Are Hong Kong media chiefs optimistic or pessimistic about the future development

Scope of survey and research method

In addition to the surveys on Hong Kong's media users and content producers, our research team conducted individual in-depth interviews with senior executives of prominent media organisations in order to add to our analysis their views on how local media have responded to the rapid development of media technology and the resulting dramatic changes in the market environment.

Selection of the 12 respondents (see Appendix) was based on their influence and representativeness in the industry, as well as the diversity of media platforms covered. Thus, they come from different areas of the media in Hong Kong, including both traditional platforms—newspapers, magazines, radio and television—and digital-native platforms.

The interviews took place from May to July 2018, each lasting

of their respective media organisations and the media industry in general in Hong Kong?

Summary of interviews with Hong Kong media chiefs

- New media technology has had a huge impact on Hong Kong media organisations, especially traditional ones, and this impact is mainly taking place in two aspects: the market audience and the business model.
- The executives were generally concerned about the short-term prospects of Hong Kong's media industry, but they also believe that new media is the focus of future development.
- The most important way Hong Kong's traditional media organisations are responding to new media technology is by increasing information distribution platform and integrating information distribution channels.
- These Hong Kong media leaders mostly remain convinced that the principle of “content is king” is still valid, no matter what technological changes occur.
- The application of new media technologies such as data news, virtual reality and data visualisation is still not widespread in Hong Kong's media industry, and the use of artificial intelligence (AI) technology to automate news content is still rare.
- Low financial resources and lack of any guarantee of economic returns are the main reasons why Hong Kong media organisations are cautious about adopting new media technologies.

- Most media organisations in Hong Kong lack a long-term digital development strategy and seldom invest in resources to provide new media technology training for employees.

Selected quotations from interviews with Hong Kong media chiefs



“It is hard to strike a balance in development for the time being. We are facing difficulties from both sides. First, the profits of the traditional media have shrunk. Second, the benefits of new media have not emerged in terms of our investment and revenue. Therefore, all the newspaper groups are facing difficulties... I believe that we are seeking growth with caution. In the end, we are a newspaper company, and we need to have minimum sales and readership to build a feasible business model to survive. Our newspaper must be good first, but it does not mean that we reject developing digital technologies. We may develop digital technologies, because we are upgrading, groping to meet the market trend.”

—Keith Kam

Chairman, Newspaper Society of Hong Kong;
Chief Operating Officer, Ming Pao Newspapers Ltd.



“The media market in Hong Kong is really small, and there are not enough resources to support many media outlets. Now there are so many media competing against each other, and sometimes they have few choices about what they can do to overcome the difficulties of lacking resources. New media has many new outlets, but they do not necessarily produce good quality content. Even traditional media are limited in their ability to develop in new areas due to lack of resources. So far we have not found a sure-fire solution for the development of new media. The bosses have reservations about investing money to try something that is new but may not last. Traditional income sources have become poor, and how you draw income from the limited resources to develop new media depends on the owners.”

—Wong Wing Hang

Director, News & Public Affairs Department,
Hong Kong Commercial Broadcasting Ltd.



“In fact, for us, the new media has three characteristics. First, they must be two-way. Atmospheric waves are unidirectional and can be one-point-to-many. Second, new media are mobile, and do not need a fixed location, so you can use mobile phones in different locations. Third, they have extraordinary capacity... Our approach is to take

advantage of the combination and coordinate between new media and old media to achieve good results. There is also a new business model, and we must take out and compete with the new media. The competitive points cover total time, number of people and business model, and we put these three things together, otherwise you cannot compete against others.”

— Mark Lee

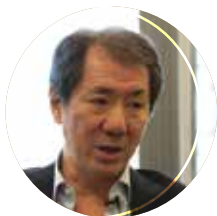
Executive Director & Group Chief Executive Officer,
Television Broadcasts Ltd.



“It is a big issue for any historical media outlet to attract and retain users of the new media generation. At the same time, new media also face another test, i.e., they need to share and interact with the audience. In fact, some programmes are overly interactive, so when certain content gets published, how do you face overwhelming positive or negative interaction? ... One of the main reasons for the difficulties faced by private media operations is that audiences are still accustomed to not having to spend money to get what they want to see. As content producers, if our content cannot make money, how do we sustain our product?”

— Leung Kar-wing

Director of Broadcasting, RTHK



“We are already new media if we define that in the context of traditional media, but we think such new media would not be enough ... This is a life platform with media,

information or views. It is a life platform of a facet, and a very important aspect. It also defines a section reflecting a lot of its character, and even defines the nature of its audience group. Therefore, we often say that this is a media-centric driving force of a life platform.”

—Yu Pun Hoi

Founder & CEO, HK01 Company Ltd.



“Our newspapers needs to be transformed, starting with editors and journalists. The key is to change the concept, actively and consciously adapting to the trends of media

development and changes in audience demands. Saying that the new media is a priority does not necessarily mean that people who make newspapers have a sense of loss. In fact, through the central kitchen mechanism and the construction of the media studio, we want all people to participate in the new media platform. All media editors and reporters in the group must be all-media journalists in the future.”

—Li Dahong

Vice Chairman & Chief Editor,
Hong Kong Ta Kung Wen Wei Media Group Limited



“The development of new media is really one of our priorities, but we need to ponder carefully about how to implement it, especially when things have to be done more

quickly, because it would be time wasting if things were to go wrong and go crooked. It could cause things to go out of focus too... Many aspects of Hong Kong Economic Journal have been automated. We have not gone to big data yet, but we could start with small data first. As for artificial intelligence, for the time being it is not about whether there is a need or not, but more about the fact that we do not think that big yet. However, we will deal with current output in a more user-friendly and more understandable way.”

—Alice Kwok

Chief Editor, Hong Kong Economic Journal



“We all know that the traditional business model is difficult to continue for ever. All the traditional media have suffered from the impact of network information, and consumers

and media consumption patterns have also changed... The biggest challenge is how to persuade consumers that costs will be incurred if they want to have high-quality information content, and they need to pay for it. This may take some time, or it will be like a pendulum effect.”

—Ronald Chiu

Executive Director, iCable News Channel



“We have three things to do in our media business. The first thing is content. This is more traditional, and each media outlet is fastidious about content, the key is to see if there is a new model. If just others pay me in the form of advertising, then it would be indifferent with newspapers. However, will there be a new model? In our case, we are trying the subscription model. The second thing is what we call the business operation. In April this year we set up a new department called the User Operations Department, in which we integrated everything related to member sales. We have not seen this new structure in other Chinese-language media organisations yet. I think that having good articles (i.e., a good product) does not necessarily mean you have good sales, so you have to add up two things together. The third thing is what we call products (that is, all kinds of technology and systems). We have many things to rely on for product promotion, such as traffic or business operations. How to solve the problem of article sharing from the perspective of products, how to improve the user’s reading experience, how to make it more convenient for people to share their views—we still have a lot of things to do.”

—**Yeung Siuming**
CEO, Initium Media



“Although the ‘subscription model’ is not very feasible in Hong Kong now, with most of the media content free, this model has been successful abroad (in outlets such as The New York Times, The Washington Post and the Wall Street Journal). Maybe one day we too will have to go back to this road so that we can survive. It may not be possible to rely on advertising alone, so we are thinking about whether to move forward in the direction of the subscription model... We hope that user subscriptions will be a major source of revenue one day. Although there are fewer people who buy newspapers at newsstands, we hope that more people will subscribe to newspapers online to make up for the losses.”

—**Cheung Kim Hung**
CEO, Next Digital Ltd.



“I think the commercial soil the new media is planted in is still very insubstantial. This is similar to ecological development. We all know that in ecological development, some lichen appear first, and then some plants grow slowly, followed by primitive animals and then complex animals. If you ask me about the status of the new media in Hong Kong right now, I would say it is in the stage where lichen is growing into primary plants or advanced plants. However, our traditional media industry is already an advanced animal, so how do we adapt to the new environment, which is still in the initial stages? I think one of my tasks in the coming years is to take up this challenge, and to transform ourselves so that we become a survivor. That would our goal.”

—**Siu Sai Wo**

Sing Tao News Corporation Ltd.



“I believe that AI is going to upend the news industry in a way that most of us are probably not discussing yet. I have talked about this on the record a number of times and said that I believe AI is going to change natural language processing and natural language generation, and both of these are going to massively impact news.”

—**Gary Liu**

CEO, South China Morning Post Ltd.

Discussion of summary of interviews

1) New technologies have had a huge impact on Hong Kong media organisations, especially traditional ones, the impacts mainly being felt in the areas of the market audience and business models.

Hong Kong media chiefs all acknowledged the massive effects of the emergence of new technology on the media organisations they are working in.

First, from the user perspective, the development of the internet has undoubtedly changed the public’s media consumption habits in Hong Kong. Thanks to the openness of online networks, real-time delivery and other technical features, more and more consumers choose the speedy, cost-free information available online rather than traditional media channels. The interviewees pointed out that this makes it difficult for the Hong Kong media to operate because audiences are accustomed to seeing what they want without paying for it. It is difficult for content producers to survive when media content is hard to charge for.

Second, online content users have also changed their preference for content information. Video has become the most popular format for news content, while long-form news reporting as done by the traditional media is no longer popular. However, a number of Hong Kong media chiefs still believe that no matter what changes there are in media patterns, there will still be some people who continue to use print media as their main channel for receiving media content, so there is still room for the survival of the print media in the future.

Third, the print user group is aging, and younger audiences are more inclined to obtain information from social media-based network platforms. Their choice of media means their world of information is no longer confined to the local but has become internationalised. In addition, a number of respondents also mentioned that their own media organisations are also making adjustments to attract younger users and international audiences, hoping to expand their audience market size.

The development of new media technology has had the most challenging impact on the commercial operations of Hong Kong's media organisations, including the original business models of the traditional media, i.e., purchasers/subscribers and commercial advertising as the core revenue sources. Nevertheless, advertising remains a major source of revenue for most media organisations in Hong Kong, and new business operations and profit models are still far from certain. Many of the Hong Kong media chiefs interviewed used the expression “under-exploration” to describe the current state of the search for a new and effective business model.

In essence, Hong Kong media organisations have been exploring three main alternative business models. The first is using their existing platforms to provide offline value-added services such as book fairs, seminars, exhibitions and tours. The second is to develop an e-commerce business, such as direct sales of advertisers' products. The third is to get users to pay, by such means as building a pay wall or setting up a membership system. However, when it comes to the payment model on digital media platforms, the views of the respondents were different. Some argued that this kind of model does not necessarily work in Hong Kong, but others said that, with current payment systems not having much effect, users will have to

become a major source of revenue for future media, and this channel is worth exploring.

2. Hong Kong media leaders are generally concerned about the short-term prospects of Hong Kong's media industry, but they also believe that new media are the future focus of development.

First, they note that the Hong Kong market is very limited, with a total population of only a little over 7 million, and yet the media scene is well developed, with a large number of media organisations. This means that competition is fierce. When the internet became available in Hong Kong, media users also gained easy access to media content from other parts of the world, so the competition in the already saturated Hong Kong market became even more intense. This fierce rivalry has caused the traditional media business model to disintegrate gradually in the new media environment, yet at the same time a new media management model has not yet formed. Thus most Hong Kong media organisations in Hong Kong are struggling.

Second, over the past dozen years internet-driven technological innovation has brought about transformation in all aspects of the society, and the media is one of the most affected. However, the decline of Hong Kong's print media has not been compensated for by an equal maturity of Hong Kong's digital media platforms. As one respondent said, the “commercial soil” Hong Kong's new media are growing in is still “very insubstantial”. To sum up the views of the respondents, the media market in Hong Kong remains in a period of constant change and adjustment, and in

the short term the vast majority of Hong Kong media, both traditional and digital-native, will continue to struggle to survive in a state of uncertainty.

At the same time, all respondents agreed that new media and new technology is the trend for the future, and they have to develop new ideas and technology as an indispensable part of their management duties. A number of respondents also made it clear that their main task in the next two or three years would be to further promote media reforms, create new media platforms with new ideas and try out new business models. However, a few respondents also said that while it is imperative to develop new media, the implementation of reform needs to be gradual, and the development of new digital content platforms should be based on what performs well on the original media platforms.

3. The most important way Hong Kong's traditional media are responding to the impact of new media technologies is to increase their information dissemination platforms and at the same time integrate their information dissemination channels.

In the early days of the internet, the response of the overwhelming majority of Hong Kong's traditional media was to set up a website and just put offline content online. Later, as social media became more common, media organisations began to set up accounts on platforms such as Facebook. Once smartphones became mainstream, media outlets began to design and operate their own mobile applications and to open up moving content platforms for mobile. All respondents said that their own media organisations had followed this multi-platform development trend.

For traditional media, in addition to the original platforms—newspapers, magazines, radio and television—they also have their own websites and social media presence. As far as digital-native media are concerned, their information distribution is similarly not limited to a single platform.

Some Hong Kong media have gone further and experimented with two initiatives: content segmentation and integrating content distribution channels on different platforms.

Rather than simply publishing the same content in the same form on different platforms, these media started to prepare different content according to the technical characteristics of these platforms. For example, they publish in their traditional media the kind of content that is more serious in nature and has more depth and richer writing skills, whereas online their content focuses more on user experiences and imagery, with the main purpose being to boosting traffic.

At the same time, some are working on channel integration as a way of dealing with multiple platforms at the same time. The simplest way of doing this is to display partial content on a free platform, to get a full version to the audience who want to get the full version. Some media place the same content on different platforms but in different genres, so that users need to view both content published online and offline to get the full story. For example, a respondent mentioned the concept of the “integrated print and online offer”, with content on a Facebook account also being downloaded to the website, and online content in the content library can also be placed in mobile applications. In addition to text, it multimedia content is included.

4. The majority of Hong Kong media chiefs still believe that the principle “content is king” remains unchanged.

They believe that the real value of media is its content, and technology is just a tool for serving content. Media people have always been “the people who produce content”, and “content is king” remains their byword today. The production of high-quality content in today’s information explosion is becoming more important than ever before. Therefore, the quality of the content should not be sacrificed in the process of adapting to the new context of communication, business and technology, and the development of any new media technology needs to be based on the prerequisites for maintaining quality content. As one respondent said, the news media organisations have always been “content first” and therefore, “It is impossible not to have solid, test-proof content”, while technology is “playing a supporting role” in news media organisations.

The insistence on quality content reflects the sense of social responsibility among respondents. It also shows that journalistic professionalism still has an important place in the Hong Kong news media context, although the industry has faced multiple pressures in recent years. The media chiefs generally believe that the pursuit of true and accurate news is still the basic goal of journalists, and news organisations should still assume their traditional social functions and professional conduct. In addition, some respondents noted that media organisations should pay attention to and follow ethical guidelines when using new media technologies. For instance, when using technology to capture user data, they should do their utmost to protect the privacy of the users concerned.

5. The application of new media technologies such as data news, virtual reality and visualisation is still not widespread in the Hong Kong media industry, and the use of artificial intelligence technology to automate news content is still rare.

In the course of the interviews, most Hong Kong media chiefs mentioned that they had already noticed that some outlets outside Hong Kong had begun to use new media technologies such as big data, artificial intelligence (AI), virtual reality (VR) and augmented reality (AR) in the production of news content. In fact, a few local media have also been experimenting with them too. For example, one or two television stations in Hong Kong have started to produce AR news content, and some news outlets have been using drones for coverage. Individual respondents also said that their media organisations were using big data technologies to personalise content delivery for their audiences. However, at present, only a small number have adopted these new media technologies, so they are far from widely used yet.

In recent years many news organisations in China and other countries have been trying to adopt artificial intelligence (AI) technology to produce news content, including the use of robots instead of reporters to write financial stories, sports news and weather items and other formulaic content. However, the Hong Kong media chiefs had differing views on this. Some said that robots would never replace humans in the news production process, while others were confident that the application of AI would be the general trend and the mainstream of vigorous development in the future. Yet despite the general positivity towards AI, the vast majority

of respondents said that they would not consider using it to automate their news content production process for time being, and would wait and see how these technologies turned out before deciding whether to make the move or not. In other words, no Hong Kong media organisation has seriously attempted to use AI technology for content production yet.

6. Inadequate financial resources and the lack of guaranteed economic returns are the main reasons for the cautious attitude of Hong Kong media organisations towards the introduction of new technologies.

The majority of respondents said that economic factors were the main reason hindering the adoption and development of new media technologies. They pointed out that media organisations are not technology developers, only technology users. The introduction of such technologies requires high capital investment, and currently the industry in Hong Kong is in a state of uncertainty, with many media facing unprecedented challenges to their original business models. To spend a lot of money on a new media technology that does not guarantee a short-term economic return is therefore unattractive, and there has been little effort to see if money can be made from it. As one respondent said, “Hong Kong’s market is so small, investment in technology and hardware or software for online media platforms has so far had a relatively low economic impact.”

Besides, many respondents believe that new media technology is very often just a “gimmick”, only changing the way content is presented rather than changing the content itself. Therefore, because they are “content

people”, investing a lot of resources in the development of new media technology was seen as rather trivial.

An added problem is that investment in and the introduction of new media technology and equipment means that media organisations have to recruit professional and technical personnel to use, operate, repair and update the new resources. Only a small number of traditional media in Hong Kong have gone so far as to set up special departments or groups dedicated to producing new media content, operating new media platforms or exploring new production modes. The majority of the respondents’ media organisations basically maintain their original organisational structure unchanged, without making any adjustments in response to the emergence of the new situation. In other words, the production of new media content in many traditional media in Hong Kong still blends with traditional platforms. It is a common practice for journalists and editors in Hong Kong to take into account the content requirements of new media platforms while producing content, but, although some media, including digital-native media, already have their own small-scale technical teams, these technical staff are still in a relatively marginalised position. As one respondent said: “The role of IT in content production is not very strong”. Technical staff in Hong Kong media organisations are mainly responsible for the operation and maintenance of new media platforms rather than daily news production. Respondents also said that their media organisations would not recruit specialised technical experts. If there were any demand for data mining, they would rather use specific software developed by others or outsource the project to a technical company.

7. Most media organisations in Hong Kong lack a long-term digital development strategy and rarely

put resources into training their staff in new media technologies.

In the interviews with Hong Kong media chiefs, it was noted that most Hong Kong media organisations had not formulated long-term digital development strategies. As a result, many have not introduced new technologies in a planned manner, often experimenting with them through the personal enterprise of staff members who are interested or through new recruits or even student interns. In other words, the process of adopting new media technologies is not top down but bottom up. Many interviewees also said that with the continuing emergence of new media technology in recent years, experienced senior staff are struggling to keep up, most of them continuing their daily content production practices in accordance with experience accumulated over the years. If they do adopt new technologies, they prefer to keep them at a relatively simple level, such as digital image acquisition, digital content publication, and so on.

In terms of human resources development, the majority of respondents said that most Hong Kong media organisations had not developed a thorough new media skills training system. They have not invested enough resources in training staff members, neither had they set up internal training departments. Instead, they would rather encourage employees to learn how to use new media technologies in their spare time. Some media organisations occasionally invite experts to run seminars or lectures for their employees, while others provide subsidies for employees who want to attend technology-related courses after work. Overall, however, most Hong Kong media have not put the development of new technologies at the strategic level, preferring to rely on innovative ideas from junior staff who are personally interested in new technologies.

(Raymond Li, Director, Institute for Journalism and Society, HKBU;
Man Zifan, PhD candidate, School of Communication, HKBU)

Appendix: The List of Interviewed Hong Kong Media Chiefs

Ronald Chiu, Executive Director, iCable News Ltd.

Cheung Kim Hung, CEO & Executive Director, Next Digital Ltd.

Keith Kam, Chairman, Newspaper Society of Hong Kong; COO of Ming Pao Newspapers Ltd.

Alice Kwok, Chief Editor, Hong Kong Economic Journal

Mark Lee, Executive Director & Group Chief Executive Officer, Television Broadcasts Ltd. (TVB)

Leung Kar-wing, Director of Broadcasting, Radio Television Hong Kong

Li Dahong, Vice Chairman & Chief Editor, Hong Kong Ta Kung Wen Wei Media Group Ltd.

Gary Liu, CEO, South China Morning Post Ltd.

Siu Sai Wo, CEO, Sing Tao News Corporation Ltd.

Wong Wing Hang, Director, News & Public Affairs Department, Hong Kong Commercial Broadcasting Ltd.

Yeung Siuming, CEO, Initium Media

Yu Pun Hoi, Founder & CEO, HK01 Company Ltd.

Cheung Kim Hung, CEO Next Digital Limited

Siu Sai Wo, CEO, Sing Tao News Corporation Limited

Gary Liu, CEO, South China Morning Post Limited



Chapter 4

Survey of Content Production in Hong Kong Media

Wang Qile
Zhang Xinzhi
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Background

Emerging digital information and communication technologies (ICTs) are gaining increased presence in newsrooms. Social media, immersive media like augmented reality/virtual reality (AR/VR), and data science applications for data-driven journalism, as well as an array of advanced video-making tools like drones and 360-degree cameras, are today commonly involved in many aspects of news production – story idea seeking, news sourcing, information verification, news story presentation, post-production content dissemination and promotion, and audience engagement (Gulyas, 2013, 2017; Hanusch, 2017; Olausson, 2017; Ottovordemgentschenfelde, 2017; Spyridou, et al., 2013). This trend has produced a greater need for technical support staff to enable and

maintain ICTs. Several famous international legacy news organizations have established news teams or branches that adopt advanced digital media technologies, such as the “NYTVR” team (producing VR-based news) and Upshot (producing data-driven journalism) of *The New York Times*, *Guardian Interactive* of *The Guardian*, *Bloomberg Graphics* of *Bloomberg*, *FT Data* of *Financial Times* and *BBC News Lab* of *BBC*. A number of digital-born media, such as BuzzFeed and Vice, are also trying new ways of storytelling.

This project offers an empirical examination of the extent to which emerging ICTs are involved in news production in the six aspects mentioned above. It also examines the extent to which media professionals collaborate across disciplines with their new technical-expert colleagues who come from outside the field of journalism. With the emergence of data-driven journalism and immersive media, programmers and designers are taking up crucial roles in the newsroom. Another possibility, though, is that journalists with traditional training may attend further studies and join workshops to catch up with the latest developments in digital transformation.

This project was carried out in Hong Kong, a media-saturated city with high internet and social media penetration rates. Our survey covered media professionals in the territory’s major news organizations. It was designed to map out the adoption of emerging ICTs in Hong Kong’s newsrooms and to assess the collaboration between practitioners with different domains of expertise to meet the challenge of new technologies. The conclusions we came to give some indication as to how journalists can better use emerging ICTs to facilitate all aspects of news production in the digital age.

The Hong Kong context

Previous research has examined how Hong Kong journalists have adopted new ICTs in their work. In terms of social media, for example, Chu (2012) interviewed several journalist bloggers and analysed their blog posts; he found that these journalists used blogs to make sense of their professional lives and to articulate their news values and ideologies, but that interactivity was very limited. As to data journalism, only a small number of news organizations have embraced data-driven news reporting. The project documents the differences in ICT adoption between legacy media (the traditional media: print outlets, broadcasters, publishing houses and other news organizations whose major news reporting and presentation approaches were present before the information age) and digital-born media (whose major operations are based online). Defined like this, for example, *South China Morning Post*, an English-language newspaper founded in 1903, is typical of legacy media, whereas HK01, a mainly online outlet established in 2016, is regarded as digital-born. In Hong Kong, the media market is in fact still dominated by a few large legacy media and digital-born media are at a nascent stage.

Research questions

Considering the above review of literature and the context of Hong Kong, the project posed the following research questions:

RQ1: To what extent are emerging media technologies involved in the following six aspects of news production in Hong Kong's local news

organizations?

1. Topic selection and story idea generation
2. News sourcing
3. Information verification
4. Data collection channels
5. The presentation methods of news stories
6. Post-production promotion and audience engagement

RQ2: To what extent are journalists performing interdisciplinary collaboration with co-workers who have different domains of expertise in news production within the Hong Kong local organizations ?

Method

Participants and procedures

The researchers conducted an online survey over the two months of July and August 2018. The study targeted at all professionals involved in all aspects of news production, including frontline reporters, editors, programmers who are related to data collection and visualisation for news investigation, as well as designers for news content. The focus was on local news media. When it is impossible to compile a valid framework to draw a random sample from all the news professionals in Hong Kong, the participants were recruited through the snowball sampling method. The research team reached the contact persons of the several major journalism organizations, such as the Hong Kong Journalists Association (founded in 1968) and the Hong Kong Federation of Journalists (founded in 1996). Then the team requested their consent to invite members from their

organizations to participate in the survey. Simultaneously, the research team also reached editors-in-chief or managerial-level staffs from several news organizations in the city, including broadcasting organizations, print media, and digital-born media, and requesting their consent to invite staff from their organizations to participate in the survey. Prior to the beginning of this research, permission the University's Research Ethics Control Commission was obtained, and all participants were properly briefed before being asked to give informed consent. Each participant was offered a HK\$100 coffee coupon as an incentive. A total of 255 participants completed the entire survey.

In the sample, 55.42% were female. On average, the participants were aged between 25 and 40. Most reported a monthly income of between HK\$30,000 and HK\$39,999. More than half (52.54%) of the respondents reported that they had a bachelor's degree, and just over one third (27.45%) reported a postgraduate degree. In terms of platforms, two thirds (66.67%) of the media professionals were from print media, one tenth (10.20%) were from digital-born media and just under one tenth (8.23%) from broadcast media. As mentioned, the most influential media organizations that occupying the largest markets shares are legacy media, which resulted in a disproportionally large number of respondents from legacy media, compared with those who were from digital-born media. Our sample contained almost equal proportions of reporters who had been working for their organization for more than five years (31.76%), those who had worked between 1 and 3 years (26.27%), and junior reporters who had worked for less than 1 year (28.62%). Over half of the respondents (53.53%) were handling the news and politics beat; whereas 54.90% were frontline reporters (compared to editorial staffs).

Measurements

The measurements included different aspects of news production, including the extent to which traditional and digital platforms in (1) topic selection and idea seeking; (2) news sourcing; (3) information verification; (4) data collection channels; (5) ICTs involved in news presentation; and (6) post-production, including content promotion and audience engaging. Also, the project tackles knowledge and collaboration models of interdisciplinary domains in the newsroom settings.

Results and summaries

1. News topics are sought and selected mainly through traditional approaches, i.e., following editors' recommendations or referring to other news organizations. Media professionals working in digital-born news organizations use online media to seek story ideas more frequently than those in legacy media.

Table 4.1 reports the approaches used for topic seeking and story idea generation.

Table 4.1. Responses to questions about methods of topic selection and story idea generation

“How often do you use the following methods when you’re selecting topics concerned with news stories? (1 = rarely use; 5 = frequently use)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
Editors’ recommendations	3.45	0.88	3.77	0.65
Other news organizations	3.40	0.84	3.58	0.90
Forums (such as HK Golden)	2.78	0.93	3.08	1.13
Content communities and crowdfunding sites (such as Wikipedia)	2.89	1.01	3.12	1.07
Microblogs (such as Twitter)	2.69	1.09	3.04	1.08
Multimedia hosting and sharing platforms (such as YouTube, Flickr)	2.85	1.07	2.88	1.28
RSS pages and apps (such as newsfeeds)	3.08	0.95	3.38	0.98

These responses show that topic selection relies primarily on traditional approaches supplemented by digital platforms. The rapid development of the internet has given rise to an increasing use of multimedia, but when it comes to story seeking, in general Hong Kong media professionals still follow the tried-and-tested ways, for example, by following editors’ top-down recommendations, or taking reference from other news organizations. Digital-born media practitioners are more likely than their legacy media colleagues to gain inspiration from digital channels, like social media websites, forums and content communities.

2. News sourcing and information verification rely on traditional offline channels. Media professionals in digital-born news organizations have more diverse news sources.

Tables 4.2a and 4.2b address the primary channels of news sourcing and information verification.

Table 4.2a News sourcing

“How often do you use the following methods when you are searching for news sources? (1 = rarely use; 5 = frequently use)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
Face-to-face/Phone/Written or Email Interviews	4.02	1.02	4.16	0.94
Press conferences	3.56	1.13	3.56	1.08
Public relations or advertising organizations	3.15	0.94	3.16	1.11
Other news organizations	3.28	0.88	3.40	1.04
Blogs	2.40	0.97	2.48	0.87
Forums (such as HK Golden)	2.56	0.99	2.52	1.08
Content communities and crowdfunding sites (such as Wikipedia, Yahoo Answers, Zhihu)	2.73	1.03	2.68	0.95
Microblogs (such as Twitter, Weibo)	2.52	1.11	2.72	1.17
Social media (e.g. Facebook, Instagram, LinkedIn)	3.26	0.99	3.32	1.03
Multimedia hosting and sharing platforms (such as YouTube, Flickr)	2.96	1.08	3.08	1.08
RSS pages and apps (such as newsfeeds)	2.67	1.14	2.64	1.35

Table 4.2b News sourcing

“How often do you use the following methods to verify the authenticity of information? (1 = rarely use; 5 = frequently use)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
Interviewees	4.29	0.93	4.24	0.83
Colleagues	3.40	0.93	3.52	1.05
Data from academic institutions, non-profit organizations, crowdfunding outlets	3.69	0.96	3.88	0.93
PR or advertising organizations	3.09	1.11	3.08	1.15
Other news organizations	3.40	0.90	3.40	1.08
Government officials	3.36	1.15	3.44	1.19
Data requested through the Code on Access to Information	2.69	1.17	2.80	1.29
First-hand data collection (e.g. questionnaires and experiments)	2.18	1.04	2.60	1.08
Blogs	2.21	1.05	2.28	1.10
Forums (such as HK Golden)	2.27	1.05	2.40	1.12
Content communities and crowdfunding sites (such as Wikipedia, Yahoo Answers, Zhihu)	2.54	1.07	2.64	1.04
Microblogs (such as Twitter, Weibo)	2.26	1.07	2.52	1.05
Social media (e.g. Facebook, Instagram, LinkedIn)	2.75	1.16	2.80	1.12
Multimedia hosting and sharing platforms (such as YouTube, Flickr)	2.58	1.13	2.60	1.19
RSS pages and apps (such as newsfeeds)	2.38	1.13	2.40	1.44

Credible sourcing and seeking multiple methods for information verification are crucial in the effort to uphold news professionalism. In the digital age, the popularisation of social media has provided more information channels for journalists, but at the same time the massive array of information circulated online makes verification more challenging.

The above results demonstrate that searching for news sources and verifying information rely mainly on traditional methods, though digital-born media practitioners’ information verification methods appear to be more diverse. On information sourcing, in general traditional interviewing is still the dominant method, but digital-born media are more inclined to seek sources via online channels. Furthermore, the two types of media differ in the ways they verify information and cross-check. Legacy media are more inclined to use offline methods such as verifying information from interviewees and public relations organizations, whereas digital-born media are more likely to use data, materials and other information found through different channels, including social media.

3. Public data released by government departments and research institutions are major channels for data acquisition.

Table 4.3 shows how news professionals obtain data (here data refers to spreadsheet structured data, which is also machine-readable and ready for statistical analysis).

Table 4.3 Sources of data

“How often do you use the following ways to collect databases in the process of news covering? (1 = rarely use; 5 = frequently use)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
Public data or records	3.58	0.98	3.58	1.06
Data collected through the Code on Access to Information	2.66	1.08	2.58	1.10
Spontaneous investigation (e.g. questionnaires and experiments)	2.60	1.16	2.83	1.13
Data provided by business institutes or industries (e.g. Nielson’s viewership report)	3.12	1.05	2.91	1.04
Data leaks (e.g. WikiLeaks)	2.32	0.99	2.38	1.01
Data collected by the media organization itself	3.11	1.09	3.30	1.22
Internet data scraped by using Application Programming Interfaces (APIs) and other tools	2.12	1.05	2.52	1.08

Media professionals in our sample in general reported that the data they most frequently used was from the government or from government-supported institutions. The legacy media are more inclined to use published data or data from institutions and ready-made data offered by other commercial sources. Digital-born media are more likely to collect data themselves, through questionnaires and scraping via APIs or custom-made tools.

4. Most respondents reported having incorporated data and video elements for news presentation,

especially drone reporting, 360-degree/GoPro shooting and live video streaming.

Tables 4.4a and 4.4b demonstrate the extent to which media professionals have adopted emerging ICTs.

Table 4.4a Content presentation methods in the news reporting process

“To what extent have you used the following ICTs during your daily news reporting (Yes = 1, No = 0), percentages of “Yes” are reported.

	Legacy media (n = 229)	Digital-born media (n = 26)
Data-driven journalism	51.97%	69.23%
Immersive media (AR/VR)	6.11%	7.69%
Drone reporting	23.58%	26.92%
Special video tools like 360-degree camera/ GoPro	26.64%	19.23%
Remote sensing/satellite imagery	6.99%	11.54%
Speech recognition	11.79%	15.38%
Live video streaming	44.54%	57.69%

It was found that data journalism and advanced video stories are important in Hong Kong news reporting. Most respondents said that they had included data elements in their stories, and around half the respondents reported that they had used live video streaming and about a quarter reporting with drones and unconventional video cameras. This suggests advanced development of video stories. Meanwhile, techniques such as remote sensing, satellite imagery and speech recognition are hardly used.

Table 4.4b Platforms for live video streaming

“Which of the following software or mobile apps have you used to conduct live video streaming (including shooting, streaming, and editing)? (Yes = 1; No = 0)” percentages of “Yes” are reported.

	Legacy Media (n = 229)	Digital-born Media (n = 26)
iMovie	20.52%	11.54%
WireCast	4.80%	7.69%
Facebook mobile app	51.53%	26.92%
YouTube mobile app	19.21%	7.69%
Final Cut	15.28%	23.08%
Adobe Premiere	36.24%	61.54%

Following on from the previous question, the project focused specifically on tools and platforms for video live streaming because these are gaining ground in the form of immersive journalism. It was found that Facebook’s mobile app dominated the field, usage being much higher than other packages. Interestingly, the adoption rate of live streaming is higher in legacy media than digital-born media.

5. Content promotion and audience engagement: Facebook dominates as the channel for audience engagement, and reporters use social media to build interpersonal networks.

Tables 4.5a and 4.5b report the extent to which social media are involved in two phases of the post-production process: 1) promotion of news stories and 2) audience engagement.

Table 4.5a Platforms for audience engagement

“Which of the followings are your main platforms to engage the audiences? (Yes = 1; No = 0)” percentages of “Yes” are reported.

	Legacy Media (n = 229)	Digital-born Media (n = 26)
Apps designed by your media organization	48.03%	61.54%
Facebook groups	74.24%	65.38%
Email groups	6.99%	11.54%

Table 4.5b reports the extent to which media professionals engage their audiences via social media channels after news stories have been published.

Table 4.5b Using social media for audience engagement

“To what extent you are using social media for the following activities, after the news reports have been published? (1 = rarely use; 5 = frequently use)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
Replying to audience comments	2.64	1.14	2.81	1.20
Using social media to build interpersonal networks among peers	3.00	1.11	3.50	0.91
Posting comments on the social media pages of other media agencies or peers	2.63	1.10	2.92	1.09
“Mentioning” other people on your social media	2.57	1.07	2.92	1.20

Facebook plays a crucial role in Hong Kong’s news organizations for audience engagement. We found that among digital-born media,

apps designed by themselves are used more often than their legacy media counterparts. On the other hand, legacy media are using Facebook more frequently. Email groups are not common in Hong Kong news organizations for audience engagement.

Social media thus are used for enlarging interpersonal professional networks. On average, media professionals in digital-born media use social media for audience engagement more frequently.

6. In our sample, respondents reported limited knowledge of data analytical skills; interdisciplinary collaboration is not very marked.

To meet the digital challenge, it seems crucial for traditional journalists to engage in self-study or join extra workshops or courses to catch up. It is also crucial for news organizations to hold extra workshops for their reporters and editors to catch up with the latest developments in the field. Only just over a quarter (26.19%) of respondents reported that their news organizations had held training programmes, seminars and workshops on digital science and techniques (e.g. data journalism, data mining, data visualisation). Only a slightly larger proportion (28.17%) had participated in such training programmes in the form of attending workshops, seminars, briefings and self-study courses or taking a higher degree in the speciality.

The project also asked how respondents evaluated their understanding of an array of data analytical tools, and the results are shown in Table 4.6.

Table 4.6 Knowledge of data science tools

“To what extent are you familiar with the following software or tools? (1 = totally unfamiliar at all, 5 = very familiar)”

	Legacy Media (n = 229)		Digital-born Media (n = 26)	
	M	SD	M	SD
General data analysis tools (software, packages or programming languages)				
• Excel	3.44	0.87	3.58	0.95
• Python	1.69	0.94	1.68	0.90
• R	1.58	0.86	1.58	0.88
Web design/front-end languages				
• HTML/CSS/JavaScript	2.47	1.09	2.09	0.90
Data storage and management				
• Cloud computing	2.16	1.13	1.84	1.14
• Databased (SQL, MongoDB)	2.00	1.12	1.68	0.95
Data processing and visualization				
• Tableau	1.66	0.87	1.76	1.09
• Open Refine	1.51	0.76	1.56	0.96
• ScrapingHug.com	1.52	0.76	1.58	0.95
• Infogram/ Canva/ Datawrapper/ Carto	1.79	1.05	2.23	1.31
Code sharing and collaboration platform				
• GitHub	1.71	0.94	1.85	1.08

Excel and web-related codes are the two toolkits best known by respondents. Advanced data analysis and visualisation tools that are gaining ground in the field—such as Python, Database, Canvas, Open Refine, and

GitHub—are much less known among journalists. This result indicates that media institutions should strengthen provision of training in data science and relevant techniques as needed by journalists.

Tables 4.7a and 4.7b report the extent to which programmers and coders are working as part of news production teams.

Table 4.7a The role of programmers in the news team

“In your media organization or team, what role(s) do coders/programmers take in news production? (1 = Yes, 0 = No, multiple selection allowed)” percentages of “Yes” are reported.

	Legacy Media (n = 229)	Digital-born Media (n = 26)
Taking the initiative to launch a new project	8.30%	15.38%
Taking part in the project in the early stages	12.22%	26.92%
Taking part in the project in the late-term stages	17.90%	38.46%
Providing assistance if needed	43.67%	61.54%

Table 4.7b The role of designers in the news team

“In your media organization or team, what role(s) do designers take in news production? (1 = Yes, 0 = No, multiple selection allowed)” percentages of “Yes” are reported.

	Legacy Media (n = 229)	Digital-born Media (n = 26)
Taking the initiative to launch a new project	6.99%	11.54%
Taking part in the project in the early stages	18.34%	38.46%
Taking part in the project in the late-term stages	54.59%	76.92%
Providing assistance if needed	34.06%	50%

As mentioned earlier, several large legacy news organizations have established news teams or branches that adopt advanced digital media technologies, such as the “NYTVR” team (producing VR-based news) and Upshot (producing data-driven journalism) of *The New York Times*, *Guardian Interactive* of *The Guardian*, *Bloomberg Graphics* of *Bloomberg*, *FT Data* of *Financial Times* and *BBC News Lab* of *BBC*. A number of digital-born media, such as BuzzFeed and Vice, are also trying new ways of storytelling. In such a context, two types of practitioners, programmers, and designers are playing important roles in the transformation of some international mainstream media to digital-driven media, while they still have a weak impact on the development of Hong Kong news media.

Conclusions and discussion

The above results yielded several observations. Most prominently, they reveal answers to the three foremost issues being discussed and debated in newsrooms in the era of big data and digital transformation:

- Issue #1: Where do media professionals seek and verify information in the digital age?
- Issue #2: How do media professionals present their stories with digital media technologies?
- Issue #3: Are media professionals in Hong Kong well prepared for the digital transformation?

The conclusions and elaborations are listed below.

1. Topic selection relies on traditional approaches, i.e., following editors' recommendations and referring to other news organizations. Media professionals working in digital-born news organizations use online media to seek stories more frequently.

2. News sourcing and verification also rely on traditional offline channels. Media professionals in digital-born news organizations have more diverse sources.

3. Public data released by the authorities, i.e., governmental officials, and academic institutions are the main sources for data analysis.

The above results demonstrate that news organizations in Hong Kong are relying on a top-down manner to determine stories to cover and follow up on stories that have been covered by other media outlets. This indicates a hierarchical power structure. Government officials and academic institutions in Hong Kong also publish open data, which reporters can use. However, the latter's limited data science skills inhibit the collection of data using advanced web data acquisition and processing tools.

4. ICTs and news presentation: Data stories and advanced video stories – such as drone reporting, 360-degree cameras, and live video streaming

- are gaining ground in Hong Kong's local news organizations.

The findings suggest that most media agencies focus on the visual presentation of news content, such as presenting videos shot with drones, 360-degree cameras and GoPro, and performing live video streaming. Data-driven journalism is also becoming a new type of storytelling method. However, their limited knowledge (see below) in data science hinders the development of this news genre.

5. Facebook takes the main role of social media promotion in the Hong Kong media; social media are also used for enlarging journalists' interpersonal networks to promote their own stories.

In general, media professionals in Hong Kong are using social media platforms – especially Facebook – to promote contents and interact with the audience, as well as building up interpersonal networks.

6. Respondents reported limited knowledge in data science applications. Less than one-third of the respondents had joined workshops or seminars on data science. Programmers and coders are in marginal positions in the news production team.

The interdisciplinary collaboration between data science and media communication is far from enthusiastic. One plausible reason is that

most news organizations lack a clear and feasible blueprint for digital transformation in the era of big data and artificial intelligence. The new business models are also underdeveloped.

Another plausible reason, according to a humble observation based on this report, is - the insufficient development of data and media communication education. In view of an increasing demand for professionals knowledgeable about computing and the media, more teaching and scholarly activities in this area should be planned in the near future.

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Chapter 5

Technology highlights of Hong Kong Media's Digital Platforms

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Research Background

The profound changes brought to the media by new information technology have been felt around the globe (Cornia, 2015). Both legacy media (traditional media—newspapers and broadcasters) and digital-native media face the problem of how to survive and develop in the new situation. For a media organisation, productivity has to be kept up to guarantee an invincible position in the face of fierce competition (Ehikhamenor, 2002). Among the three factors influencing productivity, new technology is an important force (Shay,1991). The theory of innovation diffusion maintains that new technology does not follow a uniform diffusion process from birth to wide application. Individuals or organisations receive information about it through different channels of communication, then accept and apply it in different degrees and at different rates. The process is thus influenced by a

variety of individual, group and social factors (Rogers, 1995; Gigerenzer & Selten, 2001; Dearing, 2009, etc.). The Technology Acceptance Model (TAM), established by Davis (1989), identifies the two major factors influencing the acceptance of new technology from the perspective of users: user-perceived technical usefulness and user-perceived technical ease of use (Davis, 1989; Davis et.al., 1989; Matikiti et.al., 2018).

Today, Information and Communication Technologies (ICTs) have penetrated all aspects of the media business and consumer market, resulting in a high degree of segmentation, but also setting higher requirements for media operations. Most media organisations have digital platforms to manage and integrate multiple aspects of their business, including content distribution, content presentation, interactive growth and content realisation. However, with the rapid upgrading of new technologies, the gap between different organisations in the application of technology has become increasingly marked. Some quickly follow the trend, while others are conservative and cautious and don't take action. Behind the different choices are not only comprehensive judgments made by these outlets based on their history, their strengths, their target markets and their audience's characteristics, but also the influence of the external media system, producing different characteristics in different regions of the world (Cornia, 2015).

This project focuses on Hong Kong, a region with a unique media environment. First, although Hong Kong's market is small, its media are highly developed. With its large number of news organisations and a highly segmented market, the intensity of competition is on a level rarely seen anywhere in the world. Second, the special historical and geographical environment has enriched and diversified Hong Kong's information

milieu. The audience can easily find information from all over the world, especially since the popularisation of the Internet, and this further intensifies the competition in the sector. Moreover, the high cost of office rents and staff salaries raises the threshold of access for media startups and squeezes their profit margins. In these circumstances, for most Hong Kong media organisations survival is more important than development. Therefore the application of new technology is not so much a choice as an urgent need. However, for both legacy and digital-native media, wandering and confusion are a common condition as they try to work out how to apply these technologies.

Hong Kong is the place where China’s first newspaper was born. With its long history, the territory’s media industry is in a leading position in the world because of its abundant information, press freedom and mature development. After the Internet took off in 1994, many media took to publishing their content on the World Wide Web, and it gradually became an indispensable channel. But in this period, the dominant digital platforms were still those developed by the legacy media, and the power of digital-native media was still relatively weak. But since 2010, with the development of communication technology and the spread of 4G high-speed mobile networks, digital-native media have seen explosive growth, and have quickly seized the market. Legacy media with digital platforms have continued to grow but only slowly and their market has become saturated. By 2016, digital-native outlets already outnumbered legacy media and were growing rapidly.

Table 5.1

Year / Court	Legacy media	Digital native media
1994	1	0
1995	5	0
1996	11	0
1997	14	0
1998	15	1
1999	17	1
2000	21	2
2001	22	2
2002	23	4
2003	24	4
2004	25	5
2005	28	6
2006	29	8
2007	30	9
2008	30	10
2009	31	10
2010	31	11
2011	33	13
2012	35	17
2013	35	23
2014	35	28
2015	35	36
2016	37	43
2017	37	46
2018	37	47

Competition between the two types of media has been particularly intense in Hong Kong. From the external perspective, the legacy media are highly developed and have a very strong foundation built up over their many years of penetration throughout society, enabling them to cultivate loyal audiences. Yet Hong Kong was an early adopter of the Internet and provided plenty of room for the development of digital outlets with its solid network infrastructure, the high penetration rate of its high-speed mobile networks and the wide popularity of social media.

In terms of internal strength, the legacy media have abundant capital and rich resources after their long years of development. However, with digital-native outlets being relatively new, it's not yet clear how many of these organisations will survive the fierce competition stirred up by the explosive growth in the sector. The development of both media type at the same time has exacerbated audience fragmentation and brought more uncertainty to the development of the media system in Hong Kong.

This project aims to explore how Hong Kong media organisations use ICTs to operate their digital platforms from a comparative perspective. Specifically, we will examine how media organisations can apply distribution, presentation, interactive and realisation technologies through digital platforms, paying particular attention to the similarities and differences between legacy media and digital-native media. Based on this, we will also discuss the direction of the future development of digital media platforms.

Research questions

This research focuses on the application of new media technologies

to various digital platforms by media organisations in Hong Kong, and compares legacy media and original digital media with digital platforms using the four aspects of technology mentioned above – distribution technology, presentation technology, interactive technology and realisation technology –, we discuss the following three questions:

RQ.1: What new media technologies have been used by local media organisations in Hong Kong to develop and maintain their digital platforms?

RQ.2: What new media technologies have been applied by local media organisations in Hong Kong to their digital platforms to promote market growth?

RQ.3: In looking at the above two aspects, are there any differences in the application of new media technologies between legacy media and digital-native media platforms?

Research methods

Data collection and analysis

This research mainly uses content analysis. Selection criteria for media outlets to be included in the study were as follows: 1. They had to have the ability to gather first-hand information. 2. They had to have at least one digital platform they owned themselves and to use at least one third-party new media channel; owned digital platforms include websites, apps (mobile applications), STBs (Set Top Boxes), and third-party platforms include email, social networking (e.g. Facebook), User Generated Content (UGC), video-sharing services (e.g. Youtube/Vimeo), UGC audio sharing services (e.g. Apple Podcasts). 3. Their content had to have the character of news. 4.

Their content had to have been up-to-date in July 2018.

Using the above criteria, the researchers selected 87 outlets, of which 40 were legacy media using digital platforms and 47 were digital-native media. Legacy media refers to outlets whose media form existed before the information age as their main business and their first platform¹. Digital-native media refers to those which used a network platform or mobile platform as their first product and a digital platform/third-party platform as the main way to release their content. The complete list of criteria, definitions, inclusions and exclusions is provided in the Appendix under Inclusion and exclusion criteria.

There were two main methods of data collection. The first method was manual collection and the second was automatic extraction of content based on the front-end codes of media websites using the JavaScript browser language. All data were collected from media outlets' official sites, their social media home pages and from Google search pages. Data coding was done manually in two stages. In the first, all data was encoded in three groups by six coders, and in the second the 7th coder checked to ensure reliability. The coding objects are objective content, and the reliability measurement is not applicable. We randomly selected 100 out of a total of 18,792 coding objects from 87 media, 216 research questions, and found no error items. Data analysis was realised by the use of Python code, and visualisation by a JavaScript visual library of web front end: the realisation of AntV G2 in the Visualization Library of Ali Ant Financial Services

¹ As our report is on digital media, media organisations without digital platforms were not included.

Group.

The data collection phase of the study took nearly two weeks, from 5 July 2018 to 15 July 2018. The data coding phase occupied two months, from 5 July 2018 to 1 September 2018. The data analysis phase took two weeks, from 1 September 2018 to 15 September 2018. The three phases overlapped and the whole project lasted a total of two and a half months.

Variables measured

The data collected and analysed mainly fell into four dimensions: distribution technology, presenting technology, engagement technology and monetisation technology. All questions and coding guidelines are provided in the Appendix under Guidebook.

Summaries of the results

1. Distribution technology

A. The major self-owned media platform is the website, followed by the mobile application

The most popular platform used by the Hong Kong media is the website, used by 100% of both legacy media and digital-native media. The second most popular is the mobile application, used by 64.37%. Overall, 40% of the media remain print, while media using e-newspapers accounted for 35.63% and e-newsletters 24.14%. The rest were used by under 10%: television channels by 6.90%, STBs for, 5.75% and radio 3.45%.

Table 5.2

Platform	Rate
Website	100.00%
Mobile App	64.37%
Print	40.23%
e-paper	35.63%
e-newsletter	24.14%
TV Channel	6.90%
Set Top Box	5.75%
Radio	3.45%

The TAM (technology application model) provides an explanation for these results. It can be seen that users’ perception of the ease of use of new technology is one of the most important factors in the media’s choice of technology. For media organisations, websites offer mature technology, have a low access threshold and are cost-controllable and easy to maintain. They are relatively “easy-to-use” technologies for content as well. According to the interview in Chapter 3, some heads of media organisations admitted that it is very convenient to put print content directly on to the Internet without making any changes. Some people have criticised this approach, saying that they use the website only as an electronic paper medium rather than a real digital platform (reference: part of the business model). However,the advantages of using websites are clear from the fact that 100% of the outlets examined used them.

Mobile applications were less popular than websites, with only 64.37%

of media organisations using them as their own platforms. Apps require more capital outlay and technical expertise to develop and maintain, making them much less of an “easy-to use” channel. However, the high popularity of smartphones in Hong Kong means there is huge revenue potential in mobile applications, so it is not surprising that they occupy second place in the usage rate of own platforms.

Although digital platforms are gaining momentum, there is still space for legacy technology, especially print. The survey presented in, despite the general decline in newspaper sales worldwide, 40.56% of Hong Kong residents still use print newspapers to obtain information. In this respect, the old and new media show a serious polarisation, with 75% of legacy outlets using print and only 10.64% of the digital-native media doing so. Interestingly, the e-paper, a form of digital newspaper , has a very similar usage distribution to print media, with 70% of legacy media using it and 6.38% of digital-native (see below). The content and layout of most e-papers are the same as the newspapers they come from, and for organisations publishing print media, the marginal cost of making an e-paper is very low, which makes it a common choice among legacy media.

According to Chapter 2, while more than 80% of Hong Kong citizens use TV to obtain information, less than 10% of the media use TV as a platform, and the reason is likely the cost, which makes the entry threshold very high.

B. Linked third-party platforms are mainly social media, and Facebook is popular

Hong Kong media not only use their own platforms, but also often

link themselves up to third-party platforms. The average number of links is 2.26, and they are dominated by western social media. Facebook is the most popular, with a link rate of 85% among all the media studied. The next most popular, though far behind, are Twitter and YouTube, each with a link rate of about 30%. Some media are also linked to Google+, LinkedIn, Tumblr and other western platforms. The two main mainland Chinese third-party platforms are Weibo, linked up to 11.49% of the outlets studied, and WeChat, linked to 6.90%, the two ranking 7th and 9th respectively.

Table 5.3

Platform	Rate
Facebook	85.06%
Twitter	32.18%
YouTube	29.89%
RSS	21.84%
Instagram	16.09%
Google+	12.64%
Weibo	11.49%
LinkedIn	9.20%
WeChat	6.90%
Tumblr	2.30%

While the home pages of Hong Kong media regularly link up to third-party platforms, the number of such platforms that they actually set up

accounts on is much larger, and this shows that they are very selective about the links they display on their web pages . Emerging media will tend to show links to more third-party platforms than traditional media in order to maximize their access to web traffic. Hong Kong Free Press has the most, with 10 third-party platforms.

In addition to the links, all media examined had set up their own Facebook pages, and regarded Facebook as the most important user operation channel. Facebook’s near-monopoly on Hong Kong’s media ecosystem suggests that Hong Kong outlets’ ability to use it to enhance their operations has been recognised as a proven strategy to spread high-quality content to a wider audience, but it also reflects a serious platform dependency. The game of media and platform is a long-standing one, embracing not only contention between commercial interests but also a struggle for right of discourse. As social media became mainstream, the legacy media first lost their advantage in content distribution, then lost their advantage in agenda setting. Many media organisations are aware of their reliance on social platforms, but they can’t ignore it because that would put them at too great a disadvantage. This is not just the problem in Hong Kong but a global phenomenon (Nielsen, 2012).

In the process of this platform game, the two types of news media showed polarisation. For example, in 2016-2017, Facebook vigorously promoted its “Instant Articles” technology, calling for news operators to put content directly into the Facebook ecosystem rather than relying on their own websites or mobile applications. Some media took up the opportunity to take advantage of the increased traffic it promised, while others chose to counterattack by maintaining independent identity attributes. With Facebook later being plagued by fake news and privacy

leaks, media practitioners need to think about this dependency and make a sensible response.

C. In general, the legacy media’s management of digital platforms outperforms that of the digital-native media

Legacy media performed better than digital-native media in mobile application development and Search Engine Optimisation (SEO)², but in other areas the two were very similar.

In the development of mobile applications, more legacy media use Apple’s iOS system (77.50%) than Google’s Android (67.50%), while digital-native media use both to exactly the same extent (46.81%). But in general, the development rate of mobile applications by legacy media is higher than the digital-native media. However, legacy media mostly use print and digital print, but these are rarely used by digital-native outlets.

Table 5.4

Platform/Rate	Legacy Media	Digital-native Media
Website	100.00%	100.00%
Facebook	100.00%	100.00%
iOS	77.50%	46.81%
Print	75.00%	10.64%
e-Paper	70.00%	6.38%

2 SEO is the adaptation of a site’s information to the operational rules of a search engine to improve its ranking in search results and drive online inquirers to it.

Android	67.50%	46.81%
YouTube	67.50%	87.23%
Twitter	57.50%	53.19%
Instagram	27.50%	36.17%

When it comes to SEO, the proportion of legacy media who have the Sitelinks function (Google’s provision of direct links to sub-sites of the main website) is significantly higher than that of digital-native media, at 80.00% and 53.19% respectively.

On the other two indicators (First Search Result and Optimized Excerpt), there is little difference between the two types of media. In Google search results, the proportion of legacy media and digital-native media appearing in the first display is 89.36% and 85% respectively, and the proportion of both in Optimized Excerpt is about 40%.

Table 5.5

Index/Rate	Overall	Legacy Media	Digital-native Media
First Search Result	87.36%	89.36%	85.00%
Optimized Excerpt	41.38%	42.55%	40.00%
Sitelinks	65.52%	53.19%	80.00%

Legacy media have a better digital platform performance according to our data, but we should be careful how we interpret it. The operation and optimisation of digital platforms are not only a matter of the choice of media organisations themselves, but is influenced by the strength of their funds, resources, talent, equipment and so on. In any case, this result has,

to some extent, broken the conventional perception that ‘an argosy cannot make a swift u-turn’. It also inspired us to think: Is the long history and huge scale of Hong Kong traditional media a booster on their way to new media, or a stumbling block? Can native digital media be able to take the lead in the new media era?

2. Presenting technology

A. Hong Kong media’s digital platform front-end³ technology is outdated.

The use of front-end technology on a website has an important impact on user experience and in optimising searches. It is clear that Hong Kong media hae not kept up with the development of this aspect of web technology. Their use of new technologies is very low in single-page web applications, load optimisation and screen auto-adaptation, all of which influence the user’s reading experience on different devices and in different network conditions. Their media traffic attraction and SEO also have a lot of room for improvement. Wappalyzer was used to calculate the technical stack of each type of media. It was found that 77% of all media still use jQuery (released in 2006) as a front-end framework for their sites, and only a few (9%) use newer technologies such as Angular, React and Vue. In the aspect of web page rendering, more than 90% of web pages are still

3 Front end: The part of a software system that directly interacts with the user, such as front end Web and app interfaces.

rendered by Web1.0 servers, and less than 30% of web pages optimise the lazy loading of images.

Table 5.6

Ranking	Tech Stack	Rate
1	jQuery	77.01%
2	jQuery Migrate	25.29%
3	jQuery UI	20.69%
4	Modernizr	17.24%
5	prettyPhoto	8.05%
6	Fancybox	6.90%
7	Moment.js	4.60%
8	Zepto	2.30%
9	Fingerprintjs	2.30%
10	Lightbox	2%

On a global scale, websites generally keep up with trends and constantly update their front-end framework because there are many advantages to doing so. The open source community is booming, and the tool chain for development and design has become complete. The prevalence of “full stack development” enables organisations to integrate various technologies with higher efficiency, which theoretically lowers the cost of adopting new technologies. Also, updating the front-end framework not only improves user experience, but also increases media organisations’ production efficiency, reduces development and maintenance costs, and offers great revenue potential.

Against this background, the overall backward technology of

Hong Kong’s media organisations is a phenomenon worth pondering. According to our interview in Chapter 3 and the survey in Chapter 4, media organisations generally are unconvinced that the benefits promised by the application of new technologies will materialise, and they have a high awareness of capital risks. Many media leaders mentioned that the application of new technologies will incur hidden costs, such as changes in working procedures and improvements in personnel cognition. Technical personnel are also often marginalised in the workplace and do not have a dominant voice in the relevant decision-making processes in media organisations.

In terms of social background, the low degree of technology applied by media organisations is closely related to the information technology environment of society as a whole. For example, the United States is the global information technology talent centre and has sufficient reserves, and the average salary of IT practitioners and the proportion of certified professionals are the highest in the world (Global Knowledge, 2018), which guarantees the sufficient talent entry of qualified personnel from all walks of life. American society has a high degree of recognition and respect for science and technology, and organisations generally have a full understanding of the benefits they bring about. By contrast, there is a shortage of scientific and technological personnel in all areas of life in Hong Kong. Society is not well aware of the prospects for new technology, and scientific and technological talents are not given much attention, so that marginalisation is common. How to strengthen the penetration of new technologies and take the lead in global competition is a serious challenge facing Hong Kong as a whole, not just the media industry.

B. New ways of presenting content have not been used effectively, but the development of live video is one of the most advanced in the world

Thanks to Hong Kong’s highly developed Internet infrastructure and the popularity of high-speed 4G networks, 87.36 percent of media support video content, with more than half supporting live video, very high figures that make it a world leader. However, compared with the international frontier trend, audio content, interactive content, data charts, information charts and other presentation methods have not been effectively applied by Hong Kong media. Only 10% of media have any audio, while 20% provide interactive content and 40% provide data charts and information charts.

Table 5.7

Content/Media	Legacy Media	Digital-native Media	Overall
Stored/Uploaded Video	85.00	76.60	80.46
Live Video	47.50	55.32	51.72
Charts/Graphics	35.00	44.68	40.23
Audio	10.00	10.64	10.34
Interactive	10.00	19.15	14.94
Content/Media	Legacy Media	Digital-native Media	Overall
Stored/Uploaded Video	85.00	76.60	80.46
Live Video	47.50	55.32	51.72

Charts/Graphics	35.00	44.68	40.23
Audio	10.00	10.64	10.34
Interactive	10.00	19.15	14.94

Hong Kong’s leading place in Internet infrastructure is reflected in its highly popular video content. According to a report released by the International Telecommunication Union (ITU, 2017), Hong Kong’s ICT Development Index ranks sixth in the world, surpassing the US and Japan, giving a special advantage to the local media. But will they follow up with the next raft of technology? With the planned further increases in bandwidth, the application and popularisation of Augmented Reality and Virtual Reality in content presentation is just around the corner. Time will tell whether they will replace video and become the kings of the next generation’s content field, but how they take off is also a weathervane of whether Hong Kong can still maintain its leading position in the world.

In addition to video, data journalism has become a hot international content form in recent years. In the past, media organisations quoted data to supplement or support facts or opinions in news stories, but now data has gradually taken a leading role in content, mainly presented in visual forms such as information graphs and data graphs. More and more international news conferences offer data journalism awards, and many universities offer data journalism courses or majors. In Hong Kong, half of the media organisations use data news as a content presentation method. The University of Hong Kong, the Chinese University of Hong Kong, the City University of Hong Kong and Hong Kong Baptist University all offer

courses and specialities in data journalism, and this will infuse more fresh blood into this field in the future.

C. The content display still bears the imprint of the paper age

The main type of content display on digital platforms, with a utilisation rate of 65.00% among mainstream legacy media web pages, is still the old grid format of newspapers; only 20% of them use web format design. Digital-native media use web format design more commonly, reaching 42%, but a similar proportion – 40.43% – still use the grid format. From the aspect of the platform, most (79%) websites have responsive designs, with single-column typesetting on the mobile side and three-column typesetting on nearly half of the pages on the desktop side.

Table 5.8

Catalogue Structure/Media	Legacy Media	Digital-native Media	Overall
Section Based	65.00	40.43	51.72
Regular Grid	17.50	42.55	31.03
Column Based	15.00	12.77	13.79
Mansory Grid	2.50	4.26	3.45

Nested typesetting is a product of the print media era. Its main characteristic is the division of the content into blocks of different sizes and with distinct priorities, each block using different designs and nesting different elements. In print media, nested typesetting is conducive to

highlighting key points and dividing levels. However, its use on digital platforms is not flexible enough and the visual effect is more complicated, requiring extra processing to apply reactive design. Meanwhile, web format typesetting weakens the concept of blocks and, though it uses a “grid”, it is flat, modular, consistent in design style and can be combined at will to divide content. The network format design is flexible and beautiful, and can automatically apply reactive design. It is suitable for chart display, and is very friendly to users of the digital platform. On the whole, grid format typesetting is more suitable than masonry format typesetting on digital platforms.

Many legacy media organisations produce print media and often choose nested typesetting on their web pages due to inertia or in order to maintain a unified style. However, in the digital-native media, where only one-tenth of outlets use print, 40.43%, do their typesetting in grid format, indicating that the typesetting concept still bears the imprint of the paper media era.

3. Interactive Technology

A. User operation relies heavily on social media, with narrow channels of interaction

As mentioned above, the Hong Kong media attach great importance to social media links, with nearly 90% of links to Facebook. Other than social media, Hong Kong media’s user interaction channels are outdated. Nearly two thirds (63.22%) of media websites have a user comment function, but other, newer, channels are much less used: only 5.75% of media

have a blog platform, and even fewer (3.45%) have forums and online chat functions. The internationally popular chatbot doesn’t exist in Hong Kong media at all. These results show that both legacy media and digital-native media seriously lack awareness of user interaction, and operational management lags far behind world trends.

Table 5.9

Ranking	Interaction Channel	Application rate
1	Post comments	63.22%
2	Media-run-blog	5.75%
3	Media-run-forum	3.45%
4	Online chat	3.45%
5	Chat bot	0

In the age of printing, the main means for a media organisation to interact with readers was by letters to the editor. These can be divided into two main categories: the type that express opinions on topics published in the newspaper, and those that participate in public debate (Wahl-Jorg Ensen, 2007). Since the advent of the digital age, the news commentary area of websites allows for both, but the difference from the print era lies in the anonymity of the Internet, which means that the quality of commentary cannot be guaranteed. Harlow’s (2015) research on US newspaper websites found that the overall mood in the news commentary area was relatively negative, and racial stereotypes were very common. This has led to many media closing their comment areas; in the past two years, Reuters, USA Today, Atlantic Monthly and others have done so, transplanting some user interactions to social media. On their own platforms, they now use

new facilities such as online chatting and chatbots for user interaction and maintenance. These interactive methods allow more robust means of two-way communication.

4. Monetisation technology

A. The business model is mainly advertising, and payment channels show a diversified trend

The business model of Hong Kong media relies mainly on advertising, which is used by 81.61% of all media. The main advertising forms are static ads, which account for 91.55% of advertising, banner ads, which account for 66.20%, and ads between paragraphs, accounting for 56.34%. In contrast, new forms of advertising are much less common: embedded ads account for just under 10% of ads, and interactive ads for just 5.63%. Other revenue models account for less, with only 9 media outlets (10%) offering online shopping and 22 offering paid content (25.29 %), with 16 media (18 %) accepting sponsorship.

Table 5.10

Ad Type	Rate
Static Ad	91.55%
Banner Ad	66.20%
Ad in Between paragraphs	56.34%
Splash Ad	22.54%
Sticky Ad	18.31%
Cover Ad	15.49%

Splash Ad in Article Page	11.27%
Embedded Ad	9.86%
Interactive Ad	5.63%

During interviews, many media executives pointed out that the commercial model with advertising at its core had been greatly impacted by digitisation, and is no longer as strong as before. This is in part a result of the global economic situation, but also because users in the information age have more choices. Media organisations are actively exploring more feasible business models, such as e-commerce and paid membership. However, advertising remains today the main way to realise the monetisation of content.

B. There is a trend of diversification of payment channels, but traditional channels have not yet exited

Payment channels used by Hong Kong media show a diversified trend. More than 60% of digital-native media support online fee payment, more than legacy media (50%). However, legacy media platforms have more channels to pay through. Credit card and PayPal are the main methods of payment, though some new payment methods, such as WeChat Pay and Alipay, have been adopted by some outlets. It’s noteworthy that a third of the media examined still use forms and cheques for payment.

Table 5.11

Payment	Rate
Credit Cards	52.00%
PayPal	50.00%

Deposit Cards	38.00%
Forms & Cheques	34.00%
Alipay	6.00%
Stripe	2.00%
WeChat Pay	2.00%

Online payment and mobile payment have become the general trend around the world, but they have been slow to infiltrate Hong Kong. According to the “Alipay HK Smart Payment Popularization Index”, released by the Hong Kong Productivity Council in July 2018, cash and the local Octopus contactless stored-value card are still the most commonly used payment methods for Hong Kong residents, with a penetration rate close to 100%. This was followed by credit cards, EPS (Electronic Payment Services, a direct payment system offered by a group of local banks) and contactless smart cards. The penetration rates of mobile payment and online payment are only 20% and 13% respectively. Most media content payment is not done by face-to-face transaction but by long-distance payment. Hong Kong’s relatively slow uptake of e-payments will inevitably hamper payment operations and long-term future consumption patterns because of low efficiency, and this will certainly limit the development of new business models that rely on e-commerce and paid content.

The strict regulations in Hong Kong coupled with consumers’ concerns about privacy have meant that Hong Kong’s approach to electronic payment has gone through many detours. In September 2018, the Hong Kong Monetary Authority launched its Faster Payment System (FPS), which supports a two-currency inter-bank real-time transfer service and can be used on computers and mobile platforms. Will this unusual step

allow Hong Kong to overtake others at this juncture? Can this upgrading boost the trend of media payment? It will take some time to answer these questions.

Conclusions

In general, the Hong Kong news media have adopted new technologies for distribution, presentation, engagement and monetisation. But in many ways, there is still a wide divergence from international trends, leaving much room for development. Legacy media and digital-native media both have their own advantages and disadvantages, but the legacy media perform better in some aspects.

First, in terms of news distribution technology, the Hong Kong media are very mature. Websites, mobile apps and social media homepages have high penetration. Relatively speaking, the legacy media have a better budget and so use mobile platforms more. Digital-native media can try to catch up by introducing open-source software, using free technology and providing access to more potential media platforms through outsourcing and other means. The legacy media also perform better when it comes to SEO. Digital-native media should make more effort to optimise searches and to precipitate high-quality content. Meanwhile, Facebook is an important channel for media transmission and broadcast in Hong Kong, and has a strong influence among users, which should attract investment and strengthen active communication.

Second, in adopting new technology, the Hong Kong media are a little behind international trends. Both types of media largely retain older front-end technologies, and the application of new technology is insufficient.

Cutting-edge methods used internationally for content presentation, audio, engagement, charts and so on have not been effectively applied. Web page layout is deeply characterised by print style, and friendlier typesetting methods for mobile terminals such as phones and tablets have not been widely applied. However, Hong Kong media's development of live video is outstanding, putting it at an advanced level in world terms. In the future, investment in video and live should be kept up, and be increased in the cases of audio, interactive and graphic content. Local media should embrace frontier technology to follow international trends.

Third, in interactive technology, the Hong Kong media are seriously behind. The development of web pages that allow for user interaction is very slow. This mainly concerns the comment function, but media providing more sophisticated facilities such as blogs, forums and online chat are relatively few, and international frontier engagement technology has almost no takers. The media actively operate their own social media accounts, but they rarely interact directly with users on social networks.

Fourth, in monetisation technology, advertising is still the main revenue stream of the Hong Kong media, mainly in the traditional form of advertising, followed by online shopping. Although the proportion using subscription mode has expanded, media payment methods are old-fashioned, inconvenient and cumbersome. In the future, a wider range of new online and mobile payment methods can be added to enhance the transformation of the subscription mode.

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Appendix: Inclusion & exclusion criteria

The study covers media organisations founded in Hong Kong that have the ability to capture first-hand information and have at least one owned digital platform and at least one third-party new media channel. “Owned digital platforms” include websites, apps (mobile applications) and STBs (set-top boxes). Third-party platforms include email, social networks (e.g. Facebook), user-generated (UG) video sharing services (e.g. Youtube/Vimeo), UG audio sharing services (e.g. Apple Podcasts). The media in the study are in the public domain, and their content has news properties.

Updates are available after July 2018.

Media included:

- Initium Media–Digital-native network outlet. Headquartered in Hong Kong, the editorial team is located in Taiwan, mainland China, Hong Kong and Macau. Has its own website, app and Facebook page.
- HK01 -
- FactWire–Digital-native non-profit network outlet. Focuses mainly on investigations, has its own editorial team, own website and FB page.
- 100Most–Wednesday Report, in-depth coverage with short videos, ability to interview and edit.

Media excluded:

- Tseung Kwan Post–Launched by the New Democratic Alliance of Hong Kong, only has Facebook page.
- 美新報 – Only newspaper.
- Sing Tao Daily–Only website.
- Bloomberg Businessweek–Independent operation, but licenses most of its content from parent company; most of its content is translated from the parent company’s product.
- 100% party outlets–Financed by a political party; they only publish the content of a certain political party.
- Merged (not split): Hold a consistent position for interviewing and editing; the main media has vertical columns, such as science and technology, diet, trends, finance, culture page – ezone, iMoney,

Criteria for whether multiple sub-brands/sub-sites of the same company/group are split:

- Split:
 - If the editorial team has been separated, then absolute split.
 - e.g. Next Magazine. Apple Daily
 - If it is considered that the subjective purpose is to establish an independent platform/brand:
 - e.g. Dotdotnews belongs to Wenwei Po, but the site tries not to show this information.
- Middle:
 - Inkstone belongs to the SCMP group, but is positioned to show Chinese news to Americans. It does not share content with the SCMP’s main edition.
- Not split:
 - The content is highly similar, including Chinese and English translation, selections, anthologies.
 - e.g. The series of Hong Kong Economic Journal: <http://www2.hkej.com/landing/index> <http://www.ejinsight.com/about-eji/> <http://startupbeat.hkej.com/>
 - Supplements:
 - 果籽 (Apple Daily Supplement)
 - Eat and Travel Weekly—Has the nature of a supplement in reality)
 - Sub-channels:

Digital-native media

News media which use a network platform or mobile platform as the first product, and digital platforms/third-party platforms as their main content distribution channel/s.

Media included:

Co-planning done by website and traditional platform, distribution times being approximately the same.

- HK01—Weekly and website
- CITIZENS’ RADIO—Launched by network radio and FM platform simultaneously

Network media brands which are independent of the parent company/original brand

《100most》 Magazine=> 《TVMost, Inkstone, Abacus

Legacy Media

Outlets whose media form existed before the information age as their main business and their first platform, with the traditional platform operating for a period of time before the launch of the website, and then developing new platforms.

- SCMP, Ming Pao, all the free newspapers, weeklies, magazines.

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List of Registered Periodicals

https://www.ofnaa.gov.hk/document/eng/service/news_search/List_of_Registered_Periodicals_EC.pdf

List of Licensed Broadcasting Services in Hong Kong

(June 1st, 2018)

https://www.ofca.gov.hk/filemanager/ofca/tc/content_108/channel_list_chi.pdf

ICRIS

<https://www.icris.cr.gov.hk/csci/>

Media included:

Digital native media (27)

- 1. HK01
- 2. Stand news
- 3. Initium Media
- 4. Hong Kong Free Press
- 5. FactWire
- 6. Hong Kong Citizen News
- 7. TVMost

- 8. Bastillepost
- 9. Memehk
- 10. VJ Media
- 11. Post 852
- 12. SocREC
- 13. unwire.hk
- 14. OrangeNews
- 15. Quan Media
- 16. Lite News Hong Kong
- 17. Truth Media Hong Kong (TMHK)
- 18. HKG Pao
- 19. LinePost
- 20. Life TV
- 21. Speakout
- 22. Silent Majority
- 23. maxsourcemia
- 24. dotdotnews
- 25. Inkstone
- 26. Abacus
- 27. Localpress hk

Vertical media /minority media /alternative media (5)

- 1. aastocks
- 2. Finet.hk
- 3. Allin Media Limited (Hong Kong Registered)
- 4. Aimpact

5. QUAMNET.COM

Newspapers-Chinese (11)

1. Hong Kong Economic Times
2. Hong Kong Commercial Daily
3. Apple Daily
4. Sing Tao Daily
5. Ming Pao
6. Wen Wei Po
7. Sing Pao
8. Epoch Times (HK)
9. Ta Kung Pao
10. Hong Kong Economic Journal
11. Oriental Daily News

Magazines (5)

1. Yazhou Zhoukan
2. Haowai
3. Next Magazine
4. The Mirror
5. Economic Digest

Newspapers-English (2)

1. South China Morning Post
2. China Daily - Asia Weekly

Distributed throughout Hong Kong (10)

1. The Standard

2. Metro Daily
3. Headline Daily
4. Am730
5. Skypost
6. Ren Min Bao
7. Wednesday Journal
8. 香港ポスト
9. PassionTimes
10. Berita Indonesia

Public broadcaster (1)

1. Radio Television Hong Kong

Radio with licence (2)

1. Commercial Radio Hong Kong
2. Metro Broadcasting Corporation Limited

Free TV (3)

1. Television Broadcasts Limited (TVB)
2. Fantastic TV
3. Viu TV

Pay TV (2)

1. Cable TV
2. Now TV

Media not included:

Regional newspapers

dp.stheadline.com–Does not meet the definition, only website

Tseung Kwan Post–Does not meet the definition, only website and FB

大嶼 POP–Meets the definition, has website and FB
WE weekly–Does not meet the definition, only website and FB
美新報 –Does not meet the definition, only newspaper
南區新聞 –Meets the definition, has website.

**Chinese and English government newspapers/
gazettes**

Hong Kong Government Gazette–Announcements only, can be excluded

Licence only

Bloomberg Businessweek

**Part of parent newspaper
(supplements, sub-columns)**

MPWeekly (Ming Pao)
SCMP Young Post (SCMP)
果籽 , Eat and Travel Weekly (Next Digital Ltd.)
East Touch, iEast Week, iJET, iPCM (Sing Tao)
U-magazine, iMoney (Hong Kong Economic Times)
Oriental Sunday, weekendhk, newMonday, Fashion & Beauty (New Media Group Limited), Economic Digest

Media which do not meet the definition

<http://www.hkcna.hk/> (<http://www.hkcna.hk/index.shtml>)–Only websites, FB pages cannot be displayed
Newspaper of the Hong Kong Professional Teachers’ Union

Proletariat Political Institute–MyRadio, Maddog.HK
People’s Radio Hong Kong, Hong Kong People Reporter–Stopped broadcasting/publication

Confirmed List

HK01, Stand news, Initium Media, FactWire, Hong Kong Citizen News, TVMost, Bastillepost, Memehk, VJ Media, Hong Kong Free Press, Post 852, SocREC, unwire.hk, OrangeNews, Quan Media, Lite News Hong Kong, Truth Media Hong Kong (TMHK), HKG Pao, LinePost, Life TV, Speakout, Silent Majority, Maxsourcemia, dotdotnews, Inkstone, Abacus, Localpress hk, Aastocks, Finet.hk, Allin Media Limited (Hong Kong Registered), Aimpact, QUAMNET.COM, Hong Kong Economic Times, Hong Kong Commercial Daily, Apple Daily, Sing Tao Daily, Ming Pao, Wen Wei Pao, Sing Pao, Epoch Times (HK), Ta Kung Pao, Hong Kong Economic Journal, Oriental Daily News, Yazhou Zhoukan, South China Morning Post, China Daily (Hong Kong), The Standard, Metro Daily, Headline Daily, Am730, Skypost, Ren Min Bao, Wednesday Journal, 香港ポスト, Radio Television Hong Kong, Commercial Radio Hong Kong, Metro Broadcasting Corporation Limited., Television Broadcasts Limited (TVB), Fantastic TV, Viu TV, Cable TV, Now TV, Inkstone, Abacus, PassionTimes, Berita Indonesia, Haowai, Next Magazine, The Mirror, Economic Digest, Local Press, The Grandtimes, Harbour Times, Open Magazine, CAPITAL (CAPITAL WEEKLY, Capital CEO +Capital Entrepreneur, Finance Asia, Hong Kong Herald, Hong Kong Business Magazine, D100, A1C1, Modia News, thinkhk, Citizens' Radio, singjai, hkpeanut.com, Dynamix, Delight Media Hong Kong, iMag HK, inHK Magazine (Total: 86)



Chapter 6

Hong Kong Media Digitalization and Their Adoption of Social Media Platforms

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Amy Lee
Caroline Huang





Media industry in Hong Kong is highly developed. Media digitalization began since the introduction of the internet to the city. As early as 1995, newspapers such as *Wen Wei Po*, *Sing Tao Daily*, *South China Morning Post*, and *The Standard* already had their own websites¹. With the innovation of digital technologies, recent years have witnessed the rapid development of media industry in Hong Kong that mark the digitalization and wide adoption of social media by traditional media and emergence of digital-born, independent/alternative media. In this section, we first review the background of digitalization of Hong Kong media. Then we present an analysis of adoption of social media by Hong Kong media.

1 Chen Changfeng, Newspaper Industry in Hong Kong from <https://read01.com/DnjK0a.html>

1. Digitalization of Hong Kong Media

Currently, there are mainly 22 newspapers in Hong Kong, including 5 free newspapers, 13 news magazines, 6 television stations, and 3 radio stations.²

In terms of print media, all of them have set up Facebook pages. Except for the magazine 100Most, all print media have their websites (see Table 1). All print newspapers and almost half of the news magazines have their smartphone applications. News media in both mainland China and Hong Kong are adopting three types of new media platforms for digitalization. In mainland China, news media mainly adopt Weibo, WeChat, and smartphone applications whereas in Hong Kong, with high smartphone (88.6%³) and Facebook (72%⁴) penetration rates, news media adopt websites, Facebook, and smartphone applications.

Newspapers go farther than magazines in terms of digitalization. Nine out of 19 newspapers, including paid newspapers (e.g., *Ming Pao*, *South China Morning Post*, *Hong Kong Economic Times*, and *Apple Daily*) as well as free newspapers (*Headline Daily*, *am730*, and *Sky Post*) have websites, Facebook pages, Twitter accounts, YouTube accounts, Instagram accounts, and smartphone applications.










2 News media in this report are organizations focus on content production and distribution, which still operate by July 2018. Media platforms for fashion news and lifestyle information, religious media, partisan media, and think tanks media are excluded.

3 Based on a survey by Hong Kong Census and Statistics Department from June to September, 2017.

4 Data from We Are Social (2016 Q4)

Table 6.1. Digitalization of Hong Kong media (newspapers and magazines)

Traditional Media	
Newspaper	
明報	     
蘋果日報	     
南華早報	     
熱血時報	     
香港經濟日報	     
頭條日報	     
am730	     
晴報	     
香港 01 週報	     
東方日報	    
信報	    
都市日報	    
文匯報	   
大公報	   
成報	   
香港商報	   
大紀元時報（港版）	   
星島日報	  
中國日報香港版	  

Newspaper	
英文虎報	  
水曜新聞	  
香港郵報	  

Magazine	
Hong Kong Business Magazine	    
明報周刊	    
壹週刊	    
ED 經濟一週	    
Finance Asia	   
資本雜誌	   
大時代財經月刊	   
號外	   
Harbour Times	  
開放雜誌	  
亞洲周刊	  
鏡報月刊	 
100 毛	 
















































Apple Daily is one of the first that adopts digital transformation. In 2009, the newspaper introduced action news (i.e., animated coverage of news stories) in Hong Kong and Taiwan. Users can watch animated news from the newspaper on smartphones or computers. Although being criticized by academia and the industry, action news has attracted lots of users. Currently, 1.16 million users subscribe action news on YouTube. The smartphone application of *Apple Daily* is also among the top in news applications in Hong Kong.

For magazines, they mainly adopt websites and Facebook pages for digitalization. *Hong Kong Business Magazine*, *Ming Pao Weekly*, and *Next Magazine* are active on social media. Launched in 2013 as a print magazine with a Facebook page, *100Most* leads the trend with impressive records. In 2015, TVMost and its Facebook page were established as satirical media outlets for online videos, many of which are parodies of TVB (a major local TV station)’s programming. TVMost’s website has over 0.2 billion visits. Facebook pages of *100Most* and TVMost in total have over 1.2 million and 0.73 million “Likes”, respectively. In 2018, Most Kwai Chung, the company that operates *100Most* and TVMost successfully filed for initial public offering (IPO). At the same time, *100Most* announced that it would cease its print edition and focused on online production and operation.

Social media adoption has brought traditional media a significant increase in readership. According to the Nielsen Media Index 2017 Year End Report, comparing with 2016, the overall average readership of daily newspapers rises 3.3%. Social media versions contributed 2% to this growth. It also contributes almost 2% to magazine (including weekly and monthly magazines) overall readership.

Television and radio stations also show high digital convergence (see table 6.2), among which Now TV, Radio Television Hong Kong (RTHK), and Commercial Radio Hong Kong have websites, Facebook pages, Twitter accounts, YouTube channels, Instagram accounts, and smartphone application. Other television and radio stations also use 4 to 5 of the above-mentioned digital channels. Facebook and YouTube are used by all the news media.

Table 6.2 Digitalization of Hong Kong media (TV and radio stations)

Traditional Media					
Television			Radio Stations		
Now 新聞台					
無線電視					
有線電視					
拉闊電視					
奇妙電視					
ViuTV					
香港電台					
商業電台					
新城電台					
					
注：  表示網站；  表示 Facebook；  表示 Twitter；  表示 YouTube；  表示 Instagram；  表示 APP					

As traditional media embracing digitalization, some digital-born media emerged and became active from 2002. Staring as Facebook pages and usually initiated by ex-practitioners of mainstream media, commentators, politicians, and business men/women, digital-born media vary in their sizes and coverage. Table 3-1 and table 3-2 show 44 digital-born media in Hong Kong, including 24 news portals, 5 online newspapers, 7 online radios stations, 2 online TV stations, 2 online magazines, 1 live news platform, and 3 financial news portals.

Among the above 7 types of digital-born media, 5 types of them (online news portals, online newspapers, online radio stations, online TV stations, and online financial news portals) adopt a variety of online channels. For instance, 6 out of 12 online news portals adopt 5 to 6 channels. Websites, Facebook, and YouTube are mostly adopted platforms, followed by Twitter, smartphone applications, and Instagram. 60% of online newspapers adopt over 5 types of digital platforms. The mostly adopted platforms are Facebook, Twitter, and YouTube. Similar to online newspapers, online radios adopt in addition to websites and Facebook, Twitter and YouTube are mostly favored platforms. 71.4% of the online radios have developed their own smartphone applications. Other online radios reply on podcast-like smartphone application to attract mobile phone users.

Table 6.3.1 Digitalization of Hong Kong media
(online platforms, online newspapers, online radio stations)


































Digital-born Media					
Online Platforms			Online Newspapers		
端傳媒	     		852 郵報	     	
香港 01	     		巴士的報	     	
立場新聞	     		香港 G 報	     	
香港獨立媒體	     		LinePost 線報	   	
輕新聞	     		Hong Kong Herald	  	
Hong Kong Free Press	     				
點新聞	     		Online Radio Stations		
Inkstone	    		D100	     	
FactWire 傳真社	    		香港天樂 媒體網	    	
先機網	    		創動力 媒體	    	
流動新聞	    		香港花生	    	
幫港出聲	    		城寨	    	
橙新聞	   		謎米網	   	
港人講地	   		民間電台	   	

	Online Platforms		
眾新聞	   		
Abacus	   		
Berita Indonesia	   		
本土新聞	  		
思考香港	  		
Truth Media Hong Kong	  		
圈新聞	  		
源新聞	  		
人民報	  		
輔仁媒體	 		

Some digital-born media also set foot in offline market. In addition to expanding to various online channels, hk01 (an online news media launched on January 2016) launched *hk01 Weekly*. Passion times, initiated by localists in Hong Kong, not only manages a website, an online radio station, and an online shop, but also prints newspapers. Expanding offline market helps digital-born media to gain popularity, generate visits, and increase profits.

Online TV and financial news portals adopt various kinds of social media platforms, including Facebook, YouTube, and Instagram. Comparing with previous types of digital-born media, live news portals and online magazines usually adopt Facebook and YouTube (see Table 6.3.2).

Table 6.3.2 Digitalization of Hong Kong media (online magazines, online TV, live news portals, financial news portals)

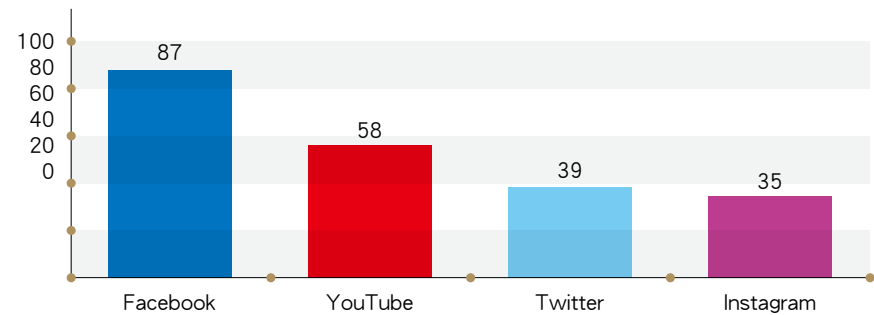
Digital-born Media					
Online TV			Online Magazines		
毛記電視	    		iMag	  	
香港天樂媒體	  		inHK Magazine	 	
Live News Portals			Financial News Portals		
SocREC 社會記錄頻道	  		阿思達克財經網	    	
			華富財經	   	
			財華香港網	 	
注：  表示網站；  表示 Facebook；  表示 Twitter；  表示 YouTube；  表示 Instagram；  表示 APP					

Next, this report focuses on social media adoption by Hong Kong media. In summary, this report presents an analysis of 87 Hong Kong media including traditional and digital-born media⁵. The findings suggest that Facebook is the most frequently used social media platform. All the 87 Hong Kong media set up Facebook pages. Following Facebook is YouTube (58 Hong Kong media), Twitter (39 Hong Kong media⁶), and Instagram (35 Hong Kong media).

5 They all belong to Most Kwai Chung. We combined 100Most and TVMost as one new media. Therefore, we have 87 Hong Kong media.

6 *Tai Kung Pao* and *Wen Wei Po* share one Twitter account. Here we counted them separately.

Number of Media available on the Plaforms

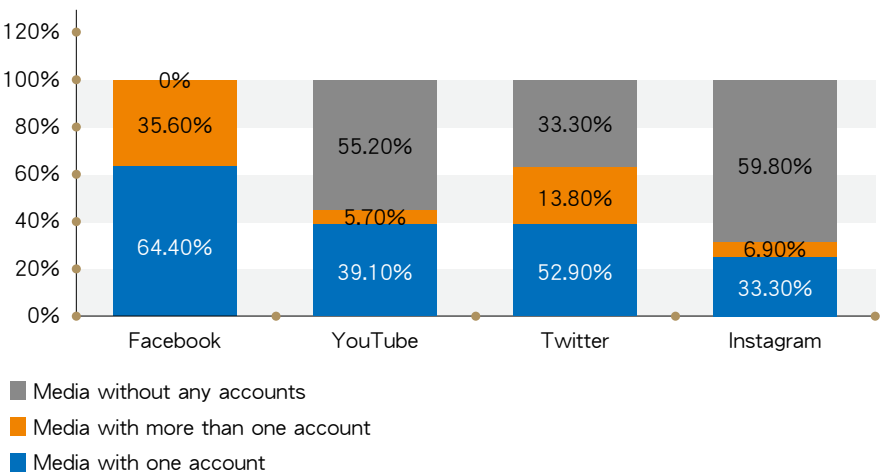


Not only managing their official accounts on social media platforms, these media also set up social media accounts for subchannels and specific columns. For example, hk01 manages 15 Facebook pages for specific topics such as @views.hk01, @hk01.news, and @hk01.hottopics. As table 4 shows, all the 87 Hong Kong media have in total 390 social media accounts, with 217 accounts on Facebook, 47 on Twitter, 80 on YouTube, and 46 on Instagram. On average, every Hong Kong media has 4.48 social media accounts.

Table 6.4 Number of Social Media Accounts for Hong Kong Media

Type of Social Media	Number of Accounts	Average Number of Accounts
YouTube	80	0.92
Instagram	46	0.53
Twitter	47	0.54
Facebook	217	2.49

Figure 6.1 Percentage of Hong Kong Media that Have Social Media Accounts



Facebook is the most frequently used social media platform. 64.4% of Hong Kong media have only 1 Facebook page. 35.6% of them have multiple pages. YouTube ranks the second with 55.2% of Hong Kong media having only 1 YouTube account and 13.8% at least 2 accounts. However, 33.3% of Hong Kong media do not have YouTube accounts. The least adopted social media platform is Instagram. 59.8% of Hong Kong media do not adopt the platform. Only 6.9% of them have more than 1 Instagram account.

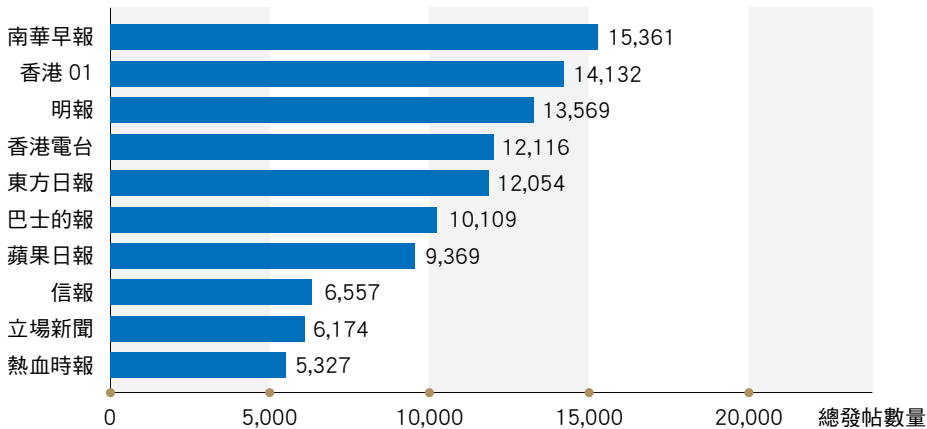
2. 2018 Hot Topics on Hong Kong Social Media (from April to June 2018)

Platforms and Media Analysis

Using data collected by uMiner®, a data collection and analysis tool developed by uMax Data Technology Ltd., this report presents an analysis

of hot topics, types of reports, and communication effectiveness based on data from 214 Facebook accounts, 47 Twitter accounts, 89 YouTube accounts, and 46 Instagram accounts.

Top 10 Accounts Based on Post Frequency

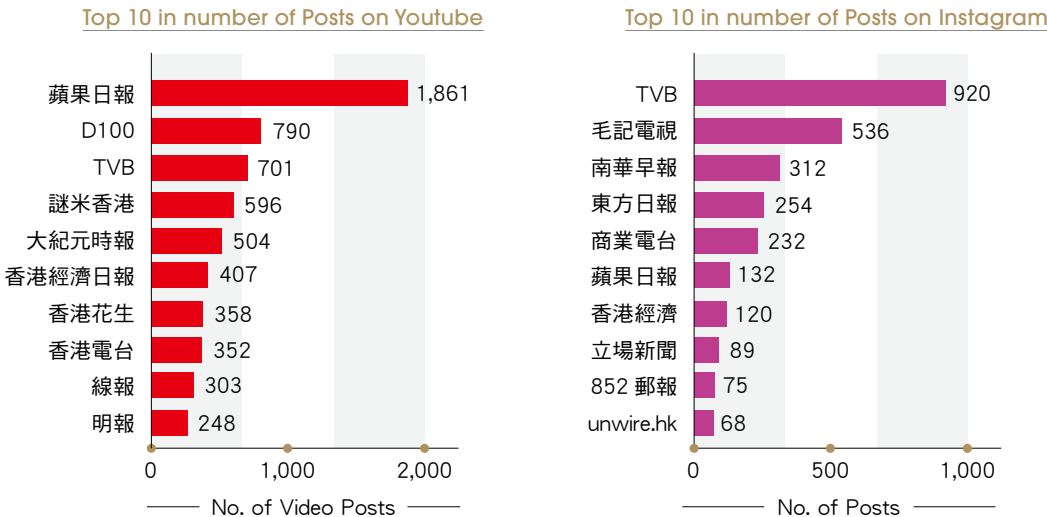
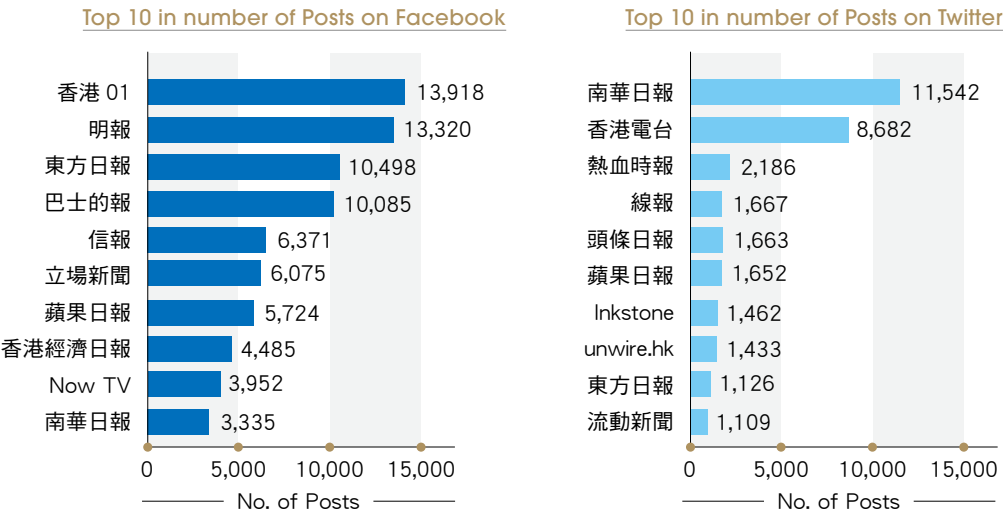


From April to June, 2018, uMiner[®] collected 145,030 Facebook posts, 37,115 tweets, 8983 YouTube vidoes, and 2,960 Instagram posts from Hong Kong media. *South China Morning Post*, *hk01*, and *Ming Pao* are among the top in terms of post frequency.

Figures below illustrate post frequency of Hong Kong on different social media platforms. *Apple Daily* is comparatively more active than other media. Across four social media platforms, it is among Top 10 in terms of post frequency.

Except that digital-born media (i.e., *hk 01*) rank top in term of post frequency on Facebook, those rank first in terms of post frequency on other kinds of social media platforms are all traditional media. In terms of Twitter posts, both types of media have similar amounts of posts. On other three types of social media platforms, we found that traditional media outnumber digital-born media among the top 10 in terms of post frequency.

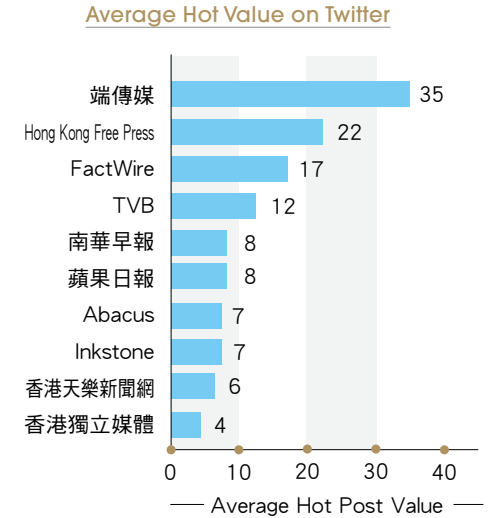
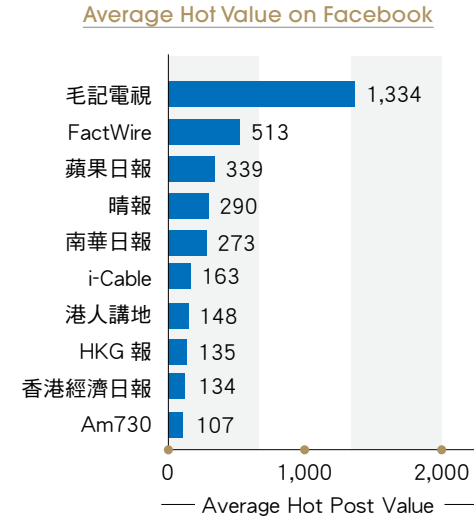
Top 10 Media on Facebook In Terms of Post Frequency



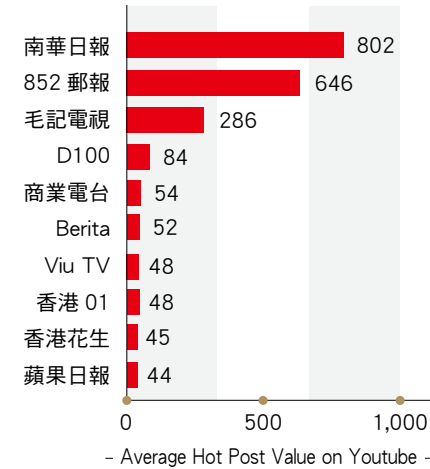
Using uMiner[®], we ranked social media posts from Hong Kong media based on their average heat values⁷. Heat value considers communication patterns of different social media and integrate different indicators (e.g., number of reads, number of likes, number of shares, number of emojis, and number of clicks) to present a comprehensive evaluation of social media posts and accounts. The higher the value, the hotter the content or the accounts. As is shown in figures below, TVMost, *Apple Daily*, and *South China Morning Post* are very active on three types of social media platforms; their average heat values are all among the top 10. Factwire and *Hong Kong Economic Times* are among the top 10 on two kinds of social media platforms. Traditional media are relatively active on Instagram and Facebook. Among top 10 media in terms of average heat values on Instagram, 70% are traditional media, whereas on Facebook, 50% are traditional media. Digital-born media are high in user engagement on Twitter and YouTube. Digital-born media account for 70% of top 10 on Twitter and 60% on YouTube.

7 Facebook heat value=number of comments + (number of likes + love + wow + haha + sad + angry)/16+ number of shares/0.7; Twitter heat value=number of likes+2*number of shares YouTube heat value = number of comments + number of likes/2.865 + number of clicks/492.189; Instagram heat value= number of comments+ number of likes/68.017+number of clicks/415.094. We used weighted numbers. For example, the heat value is a weighted combination of the number of comments, likes, and emotional reactions. For example, based on a random sample of millions of posts, we selected the median 16 as a ratio to compare the number of emotional reactions and the number of comments. That is, for every comment there are 16 emotional reactions. This is reflected in heat value when the weight number of emotional reactions is 1, the weight number for the number of comments is 16. For every 0.7 post, there is 1 share. This is reflected in the formula using 0.7 as a weighted number for the number of comments when the number of shares is weighted as 1. The weighted numbers may change over time. We used this methods for other social media platforms as well.

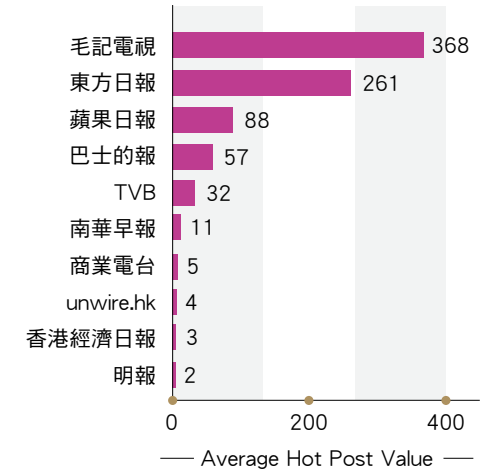
Average Heat Values of Posts



Average Hot Value on Youtube



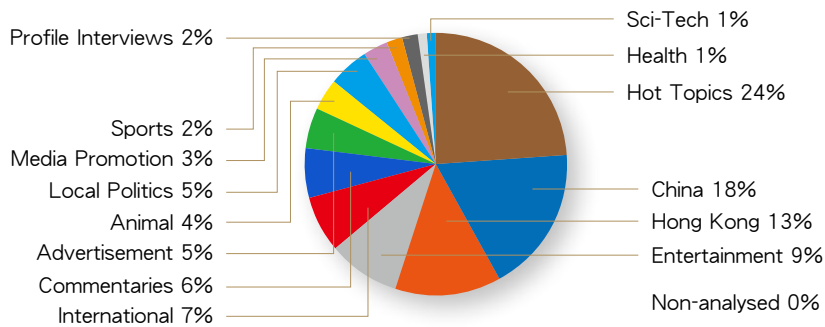
Average Hot Value on Instagram



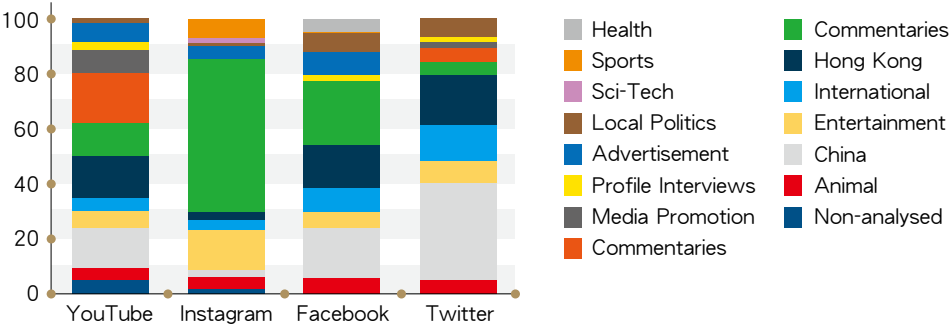
Hot Posts Analysis

To evaluate activities of Hong Kong media on social media, this report specifically analyzes top 100 posts on each of the four social media platforms based on heat values in terms of their topics, post types, and performance. We categorized the 400 posts into 14 different coverage types based on their content, such as local politics, local society, mainland China, Taiwan, and Macau, entertainment, and anecdotes. Generally speaking, anecdotes are the most popular type of post on social media (98 posts in total, around 25% of all the posts). These posts include content such as memes on Facebook, Tik Tok, and Twitter as well as utility information and reports of social experiments by media. Following anecdotes is news about mainland China, Taiwan, and Macau (72 posts in total, around 20% of all the posts). These posts include interesting news, political news, and news about the society. Local news ranks the third (13.3% of all the posts). See figure below.

Overall Hot Posts Distribution



Hot Posts Distribution on the Four Major Social Media Platforms



Coverage Types of Top 100 Posts on the Four Major Social Media Platforms

Categories	YouTube	Instagram	Facebook	Twitter	Total	%
Non-Analytical	4	1	0	0	5	1.3%
Animal	4	5	5	4	18	4.5%
China	15	2	19	36	72	18.0%
Entertainment	7	15	5	8	35	8.8%
Politics	4	3	9	13	29	7.3%
Hong Kong	16	3	16	18	53	13.3%
Hot Topics	12	57	24	5	98	24.5%
Commentaries	18	0	0	6	24	6.0%
Media Promotion	9	0	0	1	10	2.5%
Profile Interviews	3	0	1	2	6	1.5%
Advertisement	6	4	9	0	19	4.8%
Local Politics	2	2	7	7	18	4.5%
Sci-Tech	0	1	0	0	1	0.3%
Sport	0	7	1	0	8	2.0%
Health	0	0	4	0	4	1.0%
Total	100	100	100	100	400	100.0%

Analysis of individual social media platform (see figure xx) suggests that, among top 100 posts on YouTube, 18 of them are categorized as commentary/editorial content, followed by local news (16 posts), and China news (15 posts). However, among top 10 posts, news about animals and China each has three posts. These topics are popular on YouTube.

There is an overwhelming number of anecdotes on Instagram (57 posts), accounting for almost half of all the posts, followed by entertainment (15 posts). Only three posts are about local news. Among the top 10 posts, there are 8 posts about anecdotes. For the other two posts, one is about entertainment and another about animals.

On Facebook, anecdotes also receive much attention (24 posts, top 1 type of content), followed by China news (19 posts). Among the top 10 posts, there is a variety of topics, such as anecdotes (3 posts), animals, China news, and advertisements.

On Twitter, China news ranks the first, with 36 posts in total, followed by local news, which has 18 posts. Among the top 10 posts, still China news ranks the first (6 posts), followed by local news (2 posts). See figure below.

Coverage Issues of Top 10 Hot Posts

	Facebook	Twitter	Instagram	YouTube
No.1 Hot Post	China	China	Hot Topic	Animal
No.2 Hot Post	Animal	Int'l	Hot Topic	China
No.3 Hot Post	Animal	HongKong	Entertainment	Entertainment
No.4 Hot Post	Hot Topic	China	Animal	Entertainment
No.5 Hot Post	Hot Topic	China	Hot Topic	Animal
No.6 Hot Post	China	China	Hot Topic	International
No.7 Hot Post	Hot Topic	China	Hot Topic	International

No.8 Hot Post	HongKong	Commentaries	Hot Topic	China
No.9 Hot Post	Advertisement	China	Hot Topic	Animal
No.10 Hot Post	Advertisement	HongKong	Hot Topic	Hot Topic

It is worth mentioning that on Facebook and Instagram, posts about animals only account for a small number of posts (18 posts). However, this type of posts always is among the top 10 posts and usually is among the most popular 5 posts.

Overall, anecdotes are pretty popular on social media, no matter in terms of frequency or heat ranking. There is a variety of types of and a high number of China news but except Twitter, soft news usually is among the top 10 posts in term of heat ranking. Relatively speaking, hard news rarely is among the top 10 posts. On the contrary, on Twitter, all the top 10 tweet belong to hard news.

In term of topics, we manually coded the posts from the four social media platforms and reported the mostly mentioned topics as hot topics. If there was random content in the posts, we ignored these posts and excluded them from analysis.

Out findings suggest that, on Facebook, hot topics about China are mainly about successful emergency landing of an airplane of Sichuan Airlines and allowing rainbow trout be labelled as salmon. On Twitter, hot topics are mainly about Liu Xia being allowed to leave China. Hot topics on entertainment are different across the four social media platforms (Facebook: Nancy Sit Ka Yinson getting married; Instagram: Avenger 3 in theater; YouTube: Yoyo Chen and Vincent Wong Ho Shun separation; Twitter: health condition of Jet Li deteriorating). Posts about international news have a narrow focus on Malaysia election both on Facebook and

Twitter. Regarding local news, hot posts reveal topics about discussion on Cantonese as mother tongue (Facebook), Tang Lin-ling taking pictures in court hearing (YouTube), and Now TV journalist being arrested when interviewing 709 crackdown (Twitter).

A great variety of topics are revealed in hot posts of anecdotes. Only salient topic emerges, which is Kim Jong Un impersonator arriving at Singapore (Twitter). In terms of commentary/editorial posts, China-US relations issues are salient on YouTube. Debates about land issues (Facebook) and June 4 anniversary memorial events (Twitter) are mostly discussed in posts about local politics. Posts about sports mainly are about 2018 World Cup. See table below.

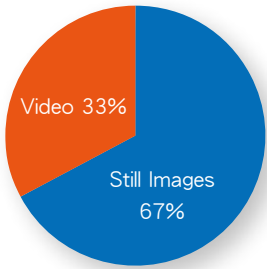
Topics in Hot Posts

Topic	Facebook	Instagram	YouTube	Twitter
Animal	\	\	\	\
China	Emergency Landing of Sichuan Airline	\	\	Liu Xia Going Abroad
	Fake Salmon	\	\	\
Entertainment	Nancy Sit's Son Married	Screening of Avengers 3	Separation of YoYo and Vincent	Jet Li's health situation
International	Malaysian Election	\	\	
Hong Kong	Cantonese discussion	\	Tang Linling in court	Now TV reporter detained
Hot Topic	\	\	\	Fake Kim Jung-un in Singapore
Commentaries	\	\	Sino-US Relations	\
Profile Interviews	\	\	\	\
Local Politics	Land Debate	\	\	June 4th commemoration
Sci-Tech	\	\	\	\
Sport	\	World Cup 2018	\	\
Health	\	\	\	\

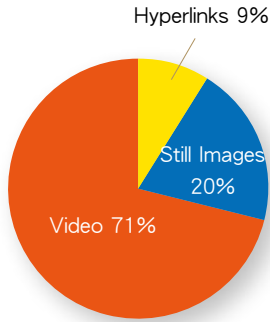
In this report, we also analyze types of content, especially posts from Instagram and Facebook, since on Twitter and YouTube, mainly people post tweets and videos. Among top 100 posts, 67% of the posts are pictures and 33% of them videos on Instagram. On Facebook, videos are the mostly used type of content in hot posts, accounting for 70% of the posts, followed by pictures (20%) and URLs (9%). See figure below.

Content Types of Instagram Posts

Types of Posts on Instagram



Types of Hot Post on Facebook



Looking at these two platforms individually, we found that effectiveness of videos on Facebook is higher than those on Instagram. 70% of the posts are videos in the top 100 posts. Also, among top 10 posts, there are 9 video posts.

Content Types of Facebook Top 10 Posts

1	Video
2	Video
3	Video
4	Video
5	Video
6	Video
7	Video
8	Picture
9	Video
10	Video

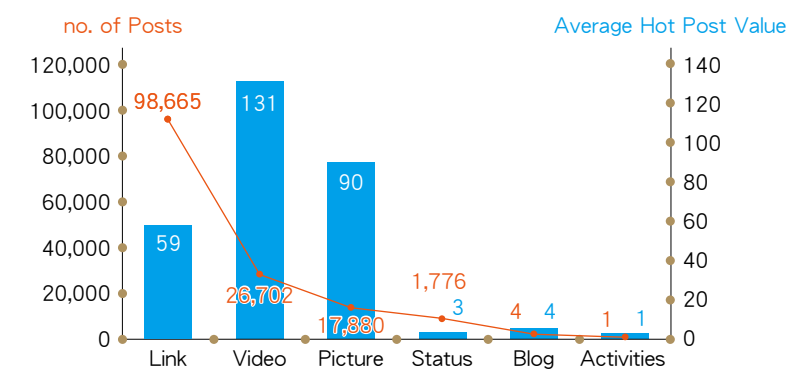
On Instagram, pictures account for 70% of top 10 posts. It should be noted that among the 7 posts, all of them are from TVMost. The rest of the three posts are from *Oriental Daily*. Indeed, the popularity of the media would influence their posts’ popularity. Therefore, it is not sure whether pictures are the best type of content on Instagram.

Content Types of Instagram Top 10 Posts

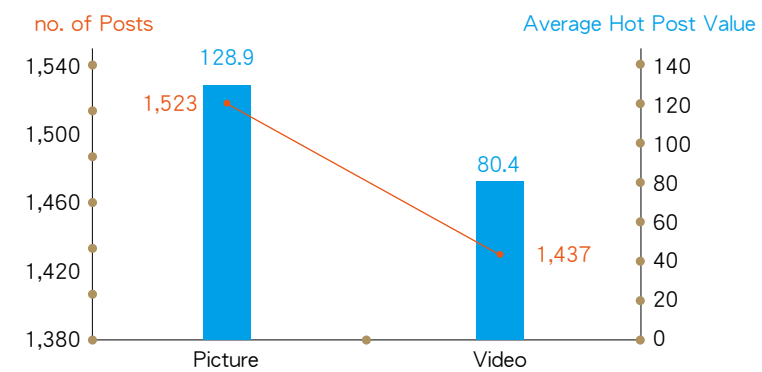
1	Picture
2	Picture
3	Picture
4	Video
5	Picture
6	Video
7	Picture
8	Picture
9	Picture
10	Video

To more specifically understand influence of types of content, we expanded our analysis to all the posts from Facebook and Instagram from April to June, 2018. We found that from many posts on Facebook, although URLs (98,665 posts) account for more than three times of posts using videos (26,702 posts), average heat values of videos are obviously higher. This finding is consistent with previous analyses. In addition, posts that include pictures (17,880 posts) have a relatively higher value of 90. On Instagram, pictures (1,523 posts) have an average heat value of 128.9, which is higher than those of videos (80.4, 1,437 posts). This finding is also consistent with the analysis of top 100 hot posts.

Content Types and Heat Values of Posts on Facebook (April to June 2018)



Content Types and Heat Values of Posts on Instagram (April to June 2018)



In terms of media performance, the best performer is TVMost, which has 110 posts out of the 400 posts from the 4 platforms, accounting for 27.5% of all the posts. TVMost also has most hot posts on Instagram and Facebook. Following TVMost is *South China Morning Post*, which has 87 posts (21.75%) of all the posts and is among the top in hot posts on YouTube and Twitter. *Hong Kong Free Press* (31 posts, 7.8%) and *Apple Daily* (30 posts, 7.5%) rank the third and the forth in terms of media performance. See table below.

Frequency of Hong Kong Media that Have Hot Posts

Media	YouTube	Instagram	Facebook	Twitter	Total
香港 01	5	0	1	0	6
端傳媒	0	0	0	20	20
Hong Kong Free Press	0	0	0	31	31
FactWire	0	0	1	0	1
毛記電視	10	72	28	0	110
謎米香港	3	0	0	0	3
852 郵報	10	0	0	0	10
線報	1	0	0	0	1
港人講地	0	0	2	0	2
香港經濟日報	1	0	4	0	5
蘋果日報	16	0	11	3	30
星島日報	0	0	2	0	2
明報	1	0	0	0	1
東方日報	1	28	1	0	30

Media	YouTube	Instagram	Facebook	Twitter	Total
南華早報	25	0	22	40	87
都市日報	0	0	1	0	1
Am730	0	0	5	0	5
晴報	0	0	6	0	6
香港電台	3	0	4	0	7
商業電台	2	0	0	0	2
電視廣播有限公司	7	0	0	0	7
Viu TV	2	0	0	0	2
香港有線電視有限公司	0	0	10	0	10
Inkstone	0	0	0	5	5
Berita Indonesia (印尼語)	4	0	0	0	4
經濟一週	0	0	1	0	1
D100	6	0	0	0	6
unwire.hk	0	0	1	0	1
香港花生	3	0	0	0	3
香港天樂新聞網	0	0	0	1	1

Meanwhile, among 100 top posts from YouTube, Facebook, and Twitter, Hong Kong media compete for attention. Those that belong to top 100 posts account for 21% of all the social media accounts set up Hong Kong media. However, on Instagram, only two Hong Kong media (*Oriental Daily* and TVMost) have hot posts, even though there are 35 media with 46 accounts on this platform. See table below.

Social Media Accounts

	YouTube	Instagram	Facebook	Twitter
Media with accounts	58	35	87	39
Media appear in Top 100 Hot Posts	17 (29.3%)	2 (5.7%)	16 (18.4%)	6 (15.4%)

On ranking, *South China Morning Post* is the winner. Among top 10 posts for each of the four social media platforms, the newspaper has 15 posts (37.5%), mostly from posts on Facebook (5 posts) and YouTube (9 posts). Following *South China Morning Post* is TVMost, accounting for 12 posts (30%), mostly from Instagram (7 posts). Initium Media wins on Twitter. Out of the top 10 tweets, it has 5 posts.

Owners of Top 10 Posts

	Facebook	Twitter	Instagram	YouTube
1	南華早報	端傳媒	毛記電視	南華早報
2	南華早報	南華早報	毛記電視	南華早報
3	南華早報	HKFP	毛記電視	南華早報
4	毛記電視	端傳媒	東方日報	南華早報
5	南華早報	端傳媒	毛記電視	南華早報
6	南華早報	HKFP	東方日報	南華早報
7	毛記電視	端傳媒	毛記電視	南華早報
8	蘋果日報	端傳媒	毛記電視	南華早報
9	毛記電視	Inkstone	毛記電視	南華早報
10	毛記電視	蘋果日報	東方日報	毛記電視

Overall, *South China Morning Post* and TVMost compete neck by neck. As a traditional media, *South China Morning Post* performs well on YouTube, Facebook, and Twitter. The newspaper sets up in total 12 accounts on the four social media platforms and is among the top in numbers of social media accounts. Relatively speaking, as a digital-born media, TVMost only adopts three platforms (YouTube, Instagram, and Facebook) and has in total 5 account. However, it has an impressive performance. Comparing average heat value of posts from April to June in 2018, it is easy to find that TVMost has excellent performance. However, *South China Morning Post* only ranks fifth on Facebook and Twitter.

Top 10 Hot Posts on the Four Social Media Platforms

	Date	Topics	Format	Categories	Media
Top 10 Hot Posts on Facebook					
1	2018/5/18 19:30	台灣父親女兒婚禮感人致辭	影片	中國	南華早報
2	2018/5/28 17:20	日本柴犬萌態	影片	動物	南華早報
3	2018/5/30 09:00	哈士奇犬萌態	影片	動物	南華早報
4	2018/4/12 21:48	東方昇《月薪代表我的心》	影片	熱話	毛記電視
5	2018/5/28 12:15	翻版金正恩抵達新加坡	影片	熱話	南華早報
6	2018/5/29 09:00	大白兔奶糖生產	影片	中國	南華早報
7	2018/5/3 22:22	《國家級任務》主持人蘭桂芳扮醉	影片	熱話	毛記電視
8	2018/4/16 12:39	本港部分銷售牛油含致癌物質	圖片	港聞	蘋果日報
9	2018/5/31 22:04	求職網廣告求職攻略	影片	廣告	毛記電視

	Date	Topics	Format	Categories	Media
10	2018/6/26 19:00	零 食 特 約 廣 告 《 仍 是 偵 緝 檔 案 》	影片	廣告	毛記電視
Top 10 Hot Posts on Twitter					
1	2018/5/7 10:30	追問四川 512 地震十週年專題	連結	中國	端傳媒
2	2018/6/19 17:35	馬來西亞大選：馬來西亞首相就對華關係接受訪問	連結	國際	南華早報
3	2018/5/16 14:13	Now TV 記者採訪「709 大 抓捕」在京受傷並被扣押	連結	港聞	HKFP
4	2018/6/14 15:00	中國政府的監控工具實為美國資助	連結	中國	端傳媒
5	2018/5/5 18:00	追問四川 512 地震十週年專題	連結	中國	端傳媒
6	2018/5/10 11:08	劉霞獲得自由	連結	中國	HKFP
7	2018/5/4 13:00	北大「反性侵」運動參與者遇阻	連結	中國	端傳媒
8	2018/6/21 17:33	讀者來信談陸台學生交流	連結	評論	端傳媒
9	2018/5/15 20:33	陸台關係	連結	中國	Inkstone
10	2018/5/5 20:21	廣東話母語討論	連結	港聞	蘋果日報
Top 10 Hot Posts on Instagram					
1	2018/6/2 21:14	雪糕英文翻譯錯誤	圖片	熱話	毛記電視
2	2018/5/3 18:13	學生上課繪畫	圖片	熱話	毛記電視

	Date	Topics	Format	Categories	Media
3	2018/4/27 12:37	復仇者聯盟 3 上映	圖片	娛樂	毛記電視
4	2018/5/7 20:42	小狗吃榴連	影片	動物	東方日報
5	2018/5/4 13:22	小童棉被被洗大哭	圖片	熱話	毛記電視
6	2018/5/12 12:30	以氣球代炮仗	影片	熱話	東方日報
7	2018/6/9 15:53	WhatsApp 打 錯英文	圖片	熱話	毛記電視
8	2018/6/7 22:04	訛傳風暴消息	圖片	熱話	毛記電視
9	2018/6/7 19:16	學生以 Marvel 電影人物交功課	圖片	熱話	毛記電視
10	2018/6/16 18:23	婆婆鬥食西瓜	影片	熱話	東方日報
Top 10 Hot Posts on Youtube					
1	2018/4/24 17:20	內地流浪狗被鬥犬攻擊	影片	動物	南華早報
2	2018/4/13 22:45	內地小童模特兒行 catwalk	影片	中國	南華早報
3	2018/6/11 20:30	內地旅客稱日本餐廳歧視	影片	中國	南華早報
4	2018/5/29 16:45	翁靜晶揭穿假和尚	影片	娛樂	南華早報
5	2018/5/24 11:18	台灣寵物犬臨終到海邊吹風	影片	動物	南華早報
6	2018/5/29 15:20	法國難民徒手爬樓救小孩	影片	國際	南華早報
7	2018/6/23 22:00	星漢責罵華人店員不說英語	影片	國際	南華早報

	Date	Topics	Format	Categories	Media
8	2018/6/6 18:29	內地學生高考前 撕課本紓壓	影片	中國	南華早報
9	2018/5/15 10:57	內地流浪狗被鬥 犬攻擊	影片	動物	南華早報
10	2018/6/11 15:04	《國家級任務》 主持人試玩抖音	影片	熱話	毛記電視

3. Summary

Embracing the internet and adopting and developing social media for content distribution has become a common practice of Hong Kong media. This report first reviews the background of digitalization of Hong Kong media and suggests that different types of media adopt different forms of online content. Through an analysis of 87 Hong Kong media and their adoption of online platforms (websites, smartphone application, and social media accounts), it suggests that newspapers and magazines usually adopt websites, Facebook, and smartphone applications whereas the digitalization of radios and TV stations adopt Facebook and YouTube. For digital-born media such as news portals, online newspapers, online radios, online TV, and financial news portals adopt various kinds of online platforms, usually more than 5 platforms. Live news service and online magazines adopt a small number of platforms, usually focusing on Facebook and YouTube.

Specifically, this report presents an analysis on how Hong Kong media adopt social media. For the four major social media platforms (Facebook, YouTube, Twitter, and Instagram), Facebook is the most popular platform on which all the 87 Hong Kong media set up their own pages or accounts,

followed by YouTube, Twitter, and Instagram. This finding is consistent with the popularity of the four platforms in Hong Kong⁸. Hong Kong media leverage the huge user bases of the social media platforms, which facilitates information communication and social interactions between the media and their users.

Traditional media make more investment to social media adoption than digital-born media. 27.2% of the traditional media and 20.5% digital-born media have their accounts across all the four major social media platforms. Taking posts from April to June in 2018 as an example, for those that rank as top 10 media in terms of posting frequency, except that on Twitter traditional media and digital-born media have similar amount of posts, traditional media relatively have more posts than digital-born media on other three social media platforms.

In terms of average heat values, TVMost receives the highest scores on Facebook and Instagram. Initium Media claims the territory on Twitter. *South China Morning Post* performs the best on YouTube. From top 10 Hong Kong media in average heat values, there are more traditional media (70%) than digital-born media (30%) on Instagram whereas on Twitter, digital-born media (70%) outnumber traditional media (30%). This might suggest that traditional media can leverage more resources to offer pictures

8 From He Jingtao, *Winter for print newspaper? Statistics from Hong Kong Census and Statistics Department show that young people believe that online meida are more influential than paid newspapers*, from <https://www.hk01.com/%E7%A4%BE%E6%9C%83%E6%96%B0%E8%81%9E/51842/%E7%B4%99%E5%AA%92%E5%AF%92%E5%86%AC-%E7%B5%B1%E8%A8%88%E8%99%95-%E5%B9%B4%E8%BC%95%E4%BA%BA%E6%8C%87%E7%B6%B2%E5%AA%92%E5%BD%B1%E9%9F%BF%E5%8A%9B%E5%8B%9D%E6%94%B6%E8%B2%BB%E5%A0%B1%E7%AB%A0>

and videos. However, digital-born media are good at crafting short content, which help them to gain more user engagement, such as likes and shares.

The analysis of top 100 posts reveals common content, topics, and coverage issues. The findings suggest that soft news, especially anecdotes, would more likely to gain more user engagement. Except social experiments conducted by the media and online programs, many anecdotes are originated from the internet and reported by the media. Reporting what is hot on social media has become an important topic in Hong Kong media. In addition to anecdotes, China news also involves lots of soft news. This type of news is quite popular, ranking the second in all the posts.

Hard news receives less exposure on social media. This is reflected not only the small number of posts among the top 100 posts but also the top 10 posts, especially on Instagram. On Facebook and YouTube, there is a variety of content. However on Twitter, hard news is very popular and ranks high in number of likes and shares.

South China Morning Post and TVMost excel in media performance. These two media have high numbers of hot posts. *South China Morning Post* set up accounts on all the four social media platforms, among the top in number of accounts (12 accounts in total). It has great performance on YouTube, Facebook, and Twitter. The newspaper mainly posts videos. It is possible that the newspaper have abundant resources to discover social media platforms and is adapting the social media ecology for content distribution.

As a digital-born media, TVMost only has five social media accounts in total on three platforms (YouTube, Instagram, and Facebook) but it has an excellent performance. Similarly, TVMost post mostly videos, a content type that is popular on YouTube and Instagram, which may contribute

to its success. Also, based on the content strategy focusing on reporting anecdotes, TVMost attracts lots of users.

Visual content receives most attention. On Facebook, videos are most effective, followed by pictures. On the contrary, URLs are not effective, with very low heat values with only 9 posts.

Ironically, traditional media that have an impressive performance also are competing for exposure using videos. For example, a majority of content from *South China Morning Post* are videos. This also helps the newspaper to win on YouTube. This suggests that, on social media, both types of media need to adapt to norms of the social media and engage their users using videos and pictures. Text-based posts may find it difficult to gain much attention, except on Twitter. That the URLs do not contribute much to user engagement suggests that it would be difficult for media to direct their users to their own websites from social media posts including URLs.

In summary, this report presents a comprehensive analysis on digitalization and social media adoption by Hong Kong media. Digitalization of Hong Kong media is reflected not only in adoption of online platforms but also in adaptation of content formats considering the distinctive features of social media. That soft news receives more attention than hard news would lead us to reflect on communication patterns and effectiveness of distribution of different types of news on social media platforms as well as user consumption habits and preferences

(Angus Cheong, Chair of Asia-Pacific Internet Research Alliance, Chief Consultant of uMax Data Technology Limited; Amy Lee, Data and Insights Manager of uMax Data Technology Limited; Caroline Huang, Research Consultant of uMax Data Technology Limited)



Chapter 7

From Observers to Change Makers:
How Hong Kong's News Media are
Adapting to Artificial Intelligence
and Machine Learning

Luwei Rose Luqiu
Vincent Xiaohui Wang





During our research, we found that Hong Kong news media managers are worried that investing in new computer knowledge technology will not create enough return. This is partly because they see the Hong Kong media market as relatively small, but another reason for their caution in taking on artificial intelligence and machine learning is that they haven't yet grasped the benefit of adopting these new techniques.

For an open society and democratic progress, quality information is crucial, and in fact the application of artificial intelligence can help the news media tackle several problems that need to be solved urgently. In the Internet age, the public face a huge amount of information, which often causes confusion. People often do not have the ability to ascertain the authenticity of information and are even unaware of the need to do so. This is one of the reasons for the rapid and large-scale dissemination of fake news and disinformation, which has led to decreased trust in the media. It is necessary at this time for the news media to assume social

and professional responsibility by quickly and effectively identifying information, determining its origins, and becoming a source of verification that the public can rely on. Artificial intelligence and machine learning can support these procedures, providing the means to ensure high-quality news content, thereby enhancing the credibility of the news media.

It is true that, while some news media around the world have begun to use artificial intelligence technology in the production of news content, the human role in generating meaningful and in-depth news reports cannot be replaced by artificial intelligence. Even for data processing we still need experienced editors and reporters. It is possible to write an article through a robot, but so far such work has only focused on simple stories, such as financial information, weather forecasts, and so on. However, artificial intelligence has in fact found a number of roles in the industry already. For one thing, it can greatly reduce duplication and redundancy of journalistic work and improve newsroom efficiency. For investigative reporting, artificial intelligence can crunch complex data much faster than humans, considerably shortening reporting time. It also has a contribution to make to content distribution, where it can be used to customise services by using different algorithms for different users, more effectively gluing readers to the product, and, more importantly, providing information directly relevant to individuals and communities, helping personal decision-making and stimulating public discussion. In these ways, the new knowledge technologies can facilitate public access to accurate information, which is an essential element of democratic processes, in which the media has always been an important stakeholder.

While the term artificial intelligence dates back to the 1950s, and has acquired several different definitions, there is a general consensus

now around the nature of AI as the theory and development of computer systems able to perform tasks normally requiring human intelligence. Today, the increasing presence of automated technologies is already changing journalism. The news media in Europe and the United States are making widespread use of artificial intelligence to take on repetitive tasks and reduce labour intensity in the searching news sources for content production. Computation is in fact assisting journalists in all phases of news production—in the collection, organisation and analysis of data, in producing news content automatically, and as a personal assistant—as well as in the dissemination of news and communication with the audience. According to a survey by the Reuters Institute for the Study of Journalism, about 75 percent of news outlets are already using AI in some form.

The following table summarizes the multiple functions of artificial intelligence in the overall news process.

Table7.1 AI in Journalism

	News Gather- ing ->	Content Pro- cessing->	Content Distri- bution ->	Engaging Audi- ence
Description	Finding stories through docu- menting and data mining Curating the abundance of data, data mining for investigative journalism	Automatic journalism for financial news/ sports news/ weather/crisis reports Augment journalism by suggesting content, fact checking, moderating fake news	Optimising media reach, publishing content in new forms, such as through voice-enabled devices, or the use of Aug- mented Real- ity and Mixed Reality in the newsroom	Audience feed- back - tracking user reaction on social me- dia, answering questions with chatbot, mod- erating reader comments Personalised news app – giv- ing audience more special- ised, custom- ized content

AI Technology Used	Machine Learning and Natural Lan- guage Process- ing to mine big data	Natural lan- guage genera- tion Knowledge graphs	Digital personal assistant (nat- ural language understanding, text-to-speech); Machine learn- ing Optimised workflow	Natural lan- guage process- ing Personalised news feed rec- ommendation
Examples	ProPublica Google News Lab Documenting Hate News Index BBC News Juic- ier The Association Press RADAR	The Washing- ton Post Heliograf; (Tencent) DreamWriter Yahoo! Wordsmith New York Times Editor	Google home voice-based news distribu- tion The weather Channel Mix reali- ty-based news report	New York Times Readerscope Toutiao Google Facebook News feed

The next section explores examples of the application of artificial intelligence in the first two columns of the table, news gathering and content processing. Much of this area is still in the trial stages.

Background news searching. Juicier is a news aggregation and content extraction tool used by the BBC newsroom to output all the stories from the RSS feeds of 850 media outlets worldwide. Once it has done that, it removes stories from the BBC itself and then categorises and tags the remaining stories according to the source news organisation, location, people involved, events, and so on. In this way, a reporter who is writing a news story can quickly search for relevant background news from many websites in the world through this tool.

Fact checking. For editors, verifying journalists’ reporting is a very important part of content processing in the newsroom. Through artificial intelligence, it is possible to simplify and speed up the process of checking source information. The New York Times use the news content extraction tool Editor to tag the key words in all articles through artificial intelligence

technology. When editors want to search for related information, they only need to provide categories such as events, people or places, and the system will provide all the relevant information, making the verification steps simpler, faster and more accurate.

Tracing online trending. Artificial technology can do search jobs that would otherwise require complex manual operations, such as identifying the top trending news stories on social media. It can even predict which stories or topics will become hot issues online. The *Associated Press* (AP) has developed a content analytics tool called *NewsWhip*, which gathers news from all the news agency's competitors on all social media platforms. It analyses how these competitors interact with their audiences on social media, how much their audiences are engaged, and who the important social media influencers are in the news transmission path.

Generating story ideas. By analysing the big data that editors and journalists can't handle in their daily work, artificial intelligence tools can discover patterns or spot unusual phenomena that can provide news rooms with story ideas that may be worth investigating. *BuzzFeed* developed an algorithm to analyse publicly available flight route data, and found that some flight patterns were strange, not going directly from starting point to destination. After an in-depth investigation, reporters discovered that the government was using spy planes to monitor what was going on down below. *Reuters* also has a similar tool called *Lynx Insight* that streamlines human-computer cooperation in a "cybernetic" newsroom. It uses artificial intelligence to process massive amounts of data and identifies patterns and spots odd phenomena, passing on these observations with suggestions as to how to use them. Editors then determine whether the findings are newsworthy.

Content management. User-generated content, such as comments and forum discussions, provides more sources of information and enhances the bond between the media and the audience. However, managing the hate speech that often emerges through this facility is one of the biggest problems the news media are facing today. Many news organisations form a special team to manage and filter online messages, but it is impossible in practice to monitor every single message. Artificial intelligence can help reduce the burden by managing comments with keyword and "semantic sentiment" analysis. The *New York Times* currently uses the *Perspective* tool, which uses machine learning to "score" the effect of a comment on a discussion and spot abusive contributions. It can then provide feedback so that the audience can choose which comments they want to see based on their preferences. This is an attempt to reduce costs through artificial intelligence to improve the quality of online discussions.

Automatic news writing. Many news media have begun to use artificial intelligence to write news, also known as "robot journalism". Examples include the *Washington Post's Heliograf*, *Yahoo!'s Wordsmith* and the AP's Reporters and *Data and Robots (RADAR)*. These machine automated writing tools focus on sports, finance and weather forecasts because these news items follow a format and usually only need specifics updating. For most reporters, this kind of journalism is equivalent to repeated labour, a task they're glad to see the back of. Through the use of technology, the speed of news updates is increased, while journalists and editors are released to engage in more in-depth work.

Data visualisation. In the digital age, infographics with linked relevant information allow the news media to present rich and complex data to the audience in a more comprehensible and meaningful way. Users

only need press a key to get the information they want, whether it's about finance, politics or entertainment. At present, there is a lot of open-source freeware available to the news media for data visualisation. Among them, *Reuters Connect*, which is jointly launched by Reuters and technology companies, is specially targeted at the news media.

Robot anchor. Human power is still needed to process news content for today's robot news presenters, but the goal of scientists is to use artificial intelligence to enable robots to host live programmes alongside humans. AI allows robot anchors to quickly process and analyse large amounts of data, and eventually they will be able to talk to guests from all over the world in different languages, and of course work 24 hours a day non-stop.

The following section looks at examples of the adoption of artificial intelligence in the second pair of columns in Table 1, content distribution and engaging the audience. This area of usage has been extensive and is relatively mature.

Customised content. Just as Facebook provides individual newsfeeds, news organisations also have personalised services for their audiences. Based on users' past browsing history, geographic location, gender, time spent on websites each day and the number of times they comment on these websites, personalised content can be delivered to individuals. *Newsroom AI*, a tool developed by a British company, provides a service that allows news outlets to do this. It has claimed that after a ten-months trial with a number of news media, Newsroom AI led to users spending four times longer on the page. It also allowed the news media to get data on how long users stay on pages.

Human-machine dialogue. Chatbots allow users to interact with their

news media through chat rooms, messages and other channels. *Quartz's* audience can use its *BotStudio* via *Facebook Messenger* to address news-related questions about such matters as time, location or people, and the app will provide relevant news items identified as being of interest. The *Guardian* also has its own chatbot on Messenger. With the news feed scheduled through a human-machine dialogue, reporters write the news briefing for the next day and push it out. When the user enters "Headline", the five most popular news stories of the day will arrive on the user's mobile phone app.

It can thus be seen that AI is a big deal for journalism and news information—possibly as important as such other major developments we have seen in the last 20 years as online platforms, digital tools and social media. AI may well transform the journalism profession, but the special factor is that its effect will be to enhance, rather than replace, the work of journalists. Artificial Intelligence will still need human input. Skilled journalists will be required to double check and interpret results. And while AI will increase the amount of content produced, it will not necessarily improve its quality—journalists will still be needed for news judgement.

Based on the trends noted above, we believe that Hong Kong's news media can use artificial intelligence for the following functions.

- To track breaking news and enhance traditional manual search methods;
- To discover social media trending topics and improve the capability of agenda setting;
- To assist in news verification and detect fake news;
- To produce data visualisations to help readers understand complex information;

- To customise user content and increase audience engagement;
- To provide chatbots to enhance interactive functions.

Since the advent of computers, journalists have been early adopters of every new development in digital communication technology. That has given the public far greater and much cheaper access to news and information, as well as extensive opportunities for journalists to do different kinds of journalism, but it has also allowed abuse to seep into the channels of communication. Our goal is to improve the credibility of the news through algorithms, data procession and social science methods. Now, with the development of artificial intelligence, using human-computer interaction and technology to improve the quality and quantity of reporting means journalists can re-establish themselves as trusted sources of information in the eyes of the public and improve the audience's perceptions of the media. These developments require journalists and editors who know how to process data, analyse data and discover from the vast array of information what topics are worth covering.

As we note above, in our survey we found that Hong Kong news media were not very keen on machine learning technology, and one factor was that they did not have the resources to provide suitable training for their journalists. It must be pointed out that the use of these new types of tools does not mean negating the traditional news process. Current journalists are already well versed in established methods, so they only have to learn to master some of the basic skills needed to use various types of open source data-processing software. The news products will still follow the original standards, but their new capacity will allow them to expand and improve the process of news editing.

To train their existing reporters and editors, the Hong Kong media can

strengthen cooperation with communication specialists at local universities. Hong Kong Baptist University's School of Communication has opened the territory's first degree course that combines journalism and computer science. Its goal is to deliver talented graduates who are prepared not only to adapt to future developments in media technology but also to provide specialist training for current media personnel. Meanwhile, in newsrooms themselves, management can consciously strengthen cooperation between technical staff, editors and journalists to produce more in-depth and audience-related content by combining their respective strengths.

We cannot talk about the improvement of the quality of journalism and the healthy operation of the news media in isolation from the audience. A society can only support the production of high-quality content if it has a sufficiently media-literate citizenry, because only when people understand the importance of the media are they willing to pay for excellent products. The promotion of media literacy requires the intervention of the government. Through systematic education starting from primary school level, people will be taught to develop the ability to judge the authenticity of information. Our universities, as public institutions, also have a responsibility to educate the public in this area, and at this crucial point in digital development, should cooperate with the media to raise awareness.

Some media managers in our survey raised real concerns, such as worries about privacy breaches arising from data collection and processing. In fact, the problems that arise from artificial intelligence are far more extensive than this. For example, the use of algorithms in the production of content is far too much based on click rates and the bias of the algorithm design itself rather than the quality of the content. This results in an unfair information flow, and it's unclear how much humans can trust the machine

at present. Ethical issues cannot be ignored in the process of applying artificial intelligence to journalism.

With all the controversy surrounding the development and use of artificial intelligence, it is very important to enhance the public's understanding of this technology and increase the transparency of its use. At this point, the public must rely on journalists and the news media to understand how the technology is being harnessed and what problems may arise. Technology has always been neutral, and the key is in how it's used. It has the potential to create all kinds of false information in the future, and if we don't act now, it could cause the public to lose all confidence in the news media and even put pressure on the democratic processes of society. At the same time, technology can be an extraordinary tool to empower citizens, including journalists and others working in the news media.

From the perspective of the development of the news industry, news outlets that can achieve sustainable development are not those that use technology to replace journalists in order to reduce costs, but that draft in technology to help editors and reporters to perform better and more efficiently to improve the quality of news products. Although the development and application of artificial intelligence will inevitably have an impact on all aspects of the news process—newsroom structure, human resources allocation and content production—the professional standards of the news, as well as the demand for excellent journalists and editors, will not change. The ultimate goal is to produce high quality news related to the audience and to society.

This report has tried to examine the development of artificial intelligence technology and how it can be used by the Hong Kong media in the digital age. There are difficulties but also, of course, opportunities, and

we hope our colleagues in the industry will adopt some of our suggestions and take on the responsibility of strengthening their products to support the future development of our society.

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