

Transformation, disruption and plurality in agrifood systems: emerging directions for research on extension

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24th ESEE, 18-21 June 2019, Acireale



An anecdote to start with...

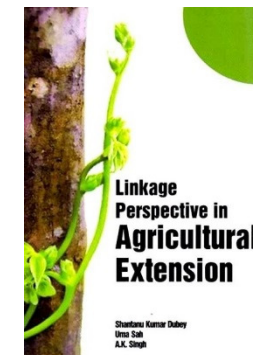
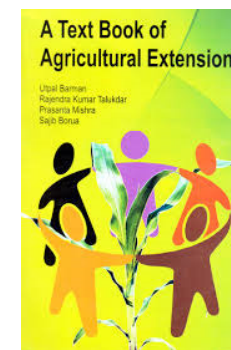
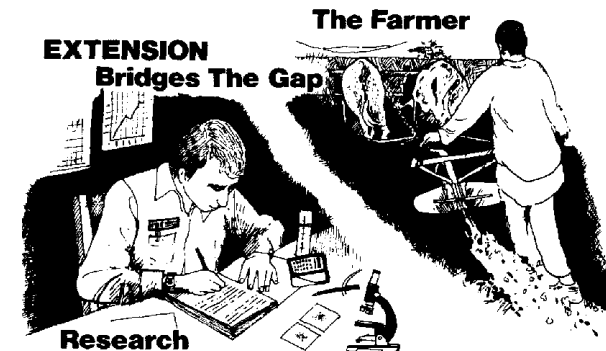
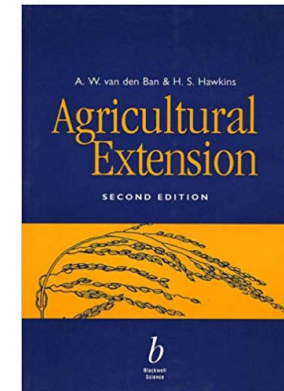
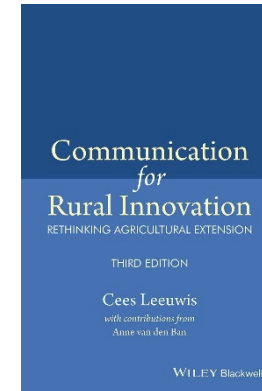


Good news: research on and attention to extension seems alive and kicking!



Current understanding of extension

- Broad range of advisory, facilitation and intermediation roles (innovation support services)
- Provided by public, private, farmer organization and NGO actors
- Provided as a core business or as part of a broader package of goods and services
- Focused on agriculture, but also rural areas and communities and also urban areas



Consolidated streams of work in recent years

- Renewed attention to AKIS development, performance and inclusion, public/private/collective roles
- Documentation of a wide range of (new) intermediary roles fulfilled by extension/advisory services
- Continuous attention to development of methodologies, tools, pedagogy
- Critical studies on role advisory services within policy and practice
- Behaviour change and adoption continue on the agenda



Journal of Rural Studies
Volume 55, October 2017, Pages 45-58



Pluralism of agricultural advisory service providers – Facts and insights from Europe

Andrea Knierim ^{a, b, c, d}, Pierre Labarthe ^e, Catherine Laurent ^f, Katrin Prager ^g, Jozef Kania ^h, Livia Madureira ⁱ, Tim Hyacinth Ndah ^{a, b}



World Development
Volume 116, April 2019, Pages 28-37



Expertise in rural development: A conceptual and empirical analysis

Philip Lowe ^a, Jeremy Phillipson ^{a, b}, Amy Proctor ^a, Menelaos Gkartzios ^a

Does this mean we can sit back and relax?



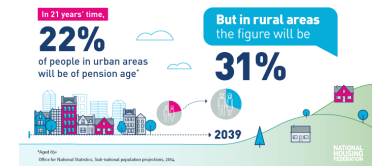
No, there's work to be done!

- We need to critically assess current paradigms (e.g. multi-actor approach)
- We need to keep abreast of fast changing agri-food environments
- We need to engage with new theoretical orientations and methodologies to renew/refresh the field
- What follows are some ideas and suggestions....



Several major challenges, developments and trends are influencing agriculture

- Growing demand for food, fibre and energy
- Climate change, resource degradation
- Growing middle class and more critical consumers
- Ageing rural population and decline (in some places), rural population growth (in other places) – but farm succession issues virtually everywhere
- Corporatization of agriculture versus family (smallholder) farms, specialization vs multifunctionality
- Shift towards food systems approach and new technologies and perspectives coming in (vertical, circular, regenerative, digital, synthetic ...)



Transformation and disruption

- Transition and transformation are key pillars of policy agendas worldwide
- Different drivers: both natural, economic, and technological
- Some of these have a (potentially) disruptive nature
- May affect both agricultural and advisory 'regimes'

Research Policy 47 (2018) 1554–1567



Contents lists available at ScienceDirect

Research Policy

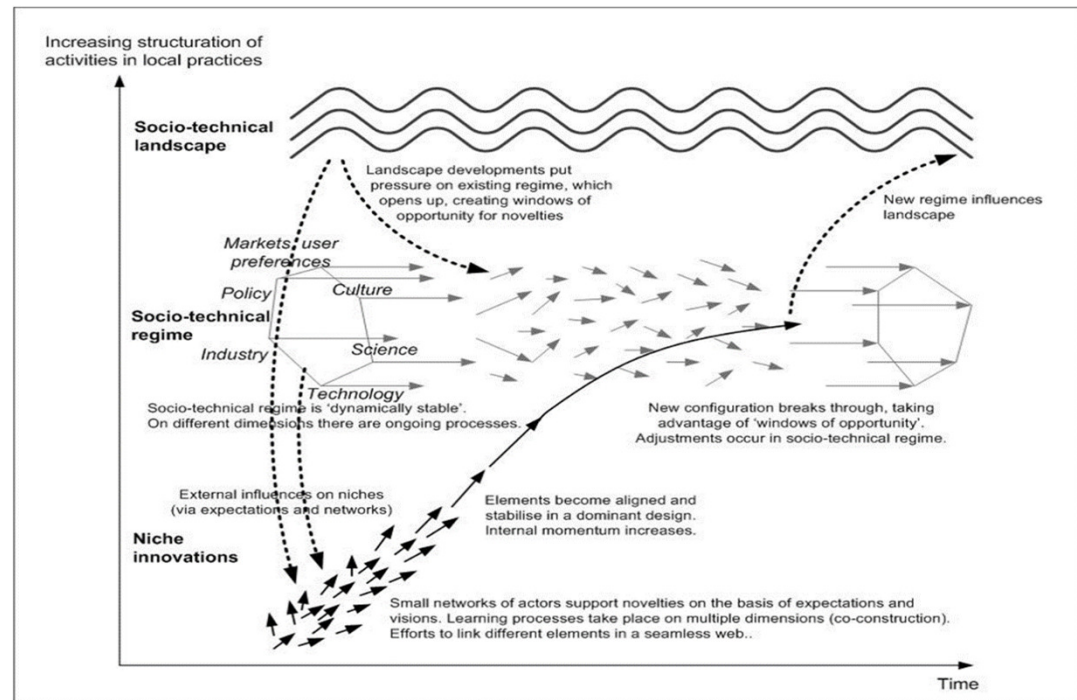
journal homepage: www.elsevier.com/locate/respol



Three frames for innovation policy: R&D, systems of innovation and transformative change

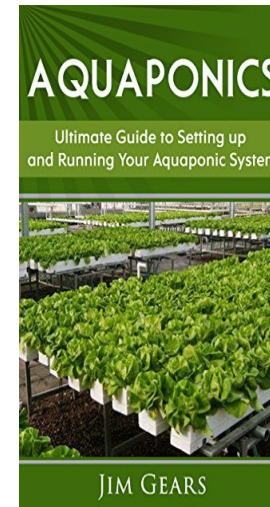
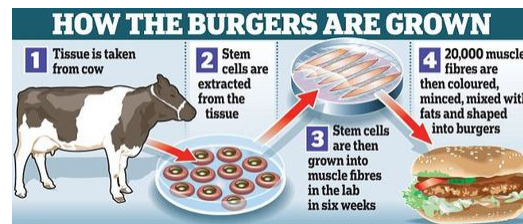
Johan Schot*, W. Edward Steinmueller

Science Policy Research Unit (SPRU), University of Sussex, United States



Plurality

- Transformation and disruption are not value free and have (competing/collaborating/co-existing) networks of actors and underlying values, visions and paradigms: *sustainable intensification, ecological intensification, agriculture 4.0, etc., etc., etc.*



What do future(s) of agriculture imply for our extension research agenda?



Understanding transformation and extension



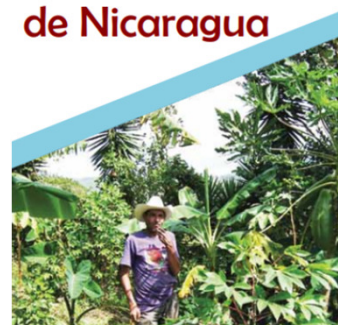
Article

Translating Agroecology into Policy: The Case of France and the United Kingdom

Raquel Ajates Gonzalez ^{1,*}, Jessica Thomas ² and Marina Chang ³



Marco Jurídico y Normativo de la Producción Agroecológica de Nicaragua



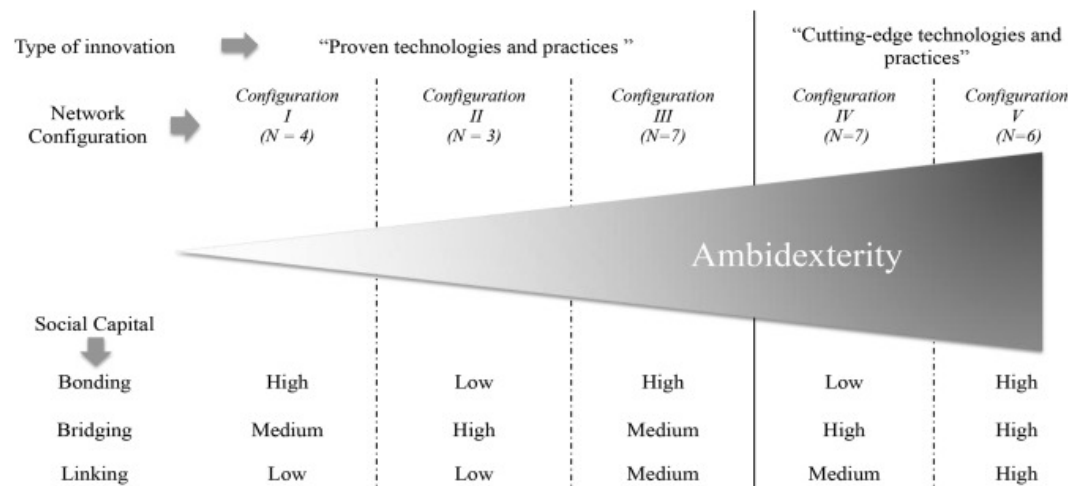
Understanding transformation and extension

- Looking at questions such as:
 - How do advisory systems respond to and connect to different transition pathways?
 - How do 'grassroots advisory movements' develop?
 - How are value dilemmas managed?
 - What shapes the "politics of policy attention" to different transition pathways (niche AKIS/ regime AKIS)?
 - How are (dis)continuities managed in the advisory profession?



Understanding plurality and extension

- Recent work on 'sub-AKIS' and 'micro-AKIS'
- Depending on farming style/orientation & transition pathway, great diversity in advisory networks



JOURNAL OF AGRICULTURAL EDUCATION AND EXTENSION, 2017
<https://doi.org/10.1080/138924X.2017.1320640>

ORIGINAL ARTICLE OPEN ACCESS Check for updates

Achieving best-fit configurations through advisory subsystems in AKIS: case studies of advisory service provisioning for diverse types of farmers in Norway

Laurens Klerkx^a, Egil Petter Stræte^b, Gunn-Turid Kvam^b, Eystein Ystad^c and Renate Marie Butli Hårstad^b

agriink

Journal of Rural Studies 69 (2019) 53–64

Contents lists available at ScienceDirect

Journal of Rural Studies

journal homepage: www.elsevier.com/locate/jrurstud

Combinations of bonding, bridging, and linking social capital for farm innovation: How farmers configure different support networks

Gabriela Cofré-Bravo^a, Laurens Klerkx^b, Alejandra Engler^{a,c,*}

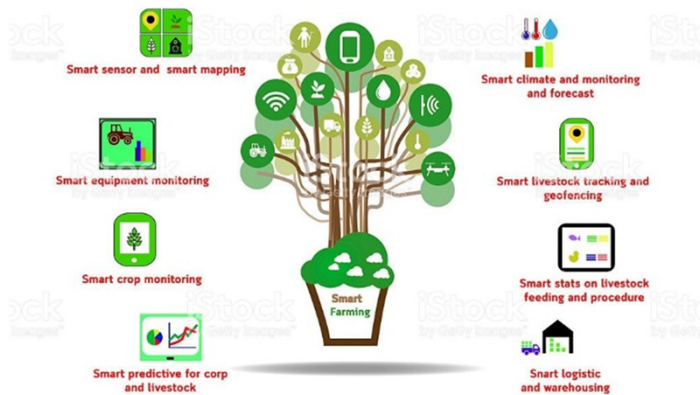
Understanding plurality and extension

- Need for understanding better:
 - Advice consumption styles: reasons for choosing independent advisors, agribusiness, 'one-stop-shop', etc. – strategic combinations
 - How advisors switch between advisory styles
 - 'Average' and 'rockstar advisors': how reputation is built
 - Advisory synergies and 'advisory bubbles': advantages and risks of closed networks
 - How different advisory networks engage with different 'back-offices'
 - Age/experience/gender composition of advisory organisations and collegial & generational interaction



Understanding disruption and extension

- Digitalization, circularity, synthetization, urbanization, financialization, corporatization, etc.



Emerging work: Digital AKIS

- Macro-level: e.g. work on DAIS (Fielke et al.), 'Digiware' (Ayre et al.), PA innovation systems (Eastwood et al.), SMART AKIS (Knierim et al.)
- Meso-level: e.g. work on farmer-advisor interaction, apps, social media (Eastwood et al., Inwood and Dale, Choudhury et al., Munthali et al.)
- Micro-level: cyber-physical-social systems (Lioutas et al., Brunori et al.)



Example: Digital citizen & data science and social media

- Apps used by citizens to monitor agri-ecosystems (e.g. biodiversity) or by farmers to monitor water/crops/pests/weeds (biosecurity, etc)
- Social media to measure sentiments of farmers or the public (social license to produce)
- Social media as exchange and connection strategy



NJAS - Wageningen Journal of Life Sciences
Volumes 86–87, November 2018, Pages 146-157



Research paper

Reflections on the potential of virtual citizen science platforms to address collective action challenges: Lessons and implications for future research

Cees Leeuwis ^{a, ✉}, K.J. Cieslik ^{a, d}, M.N.C. Aarts ^{b, c}, A.R.P.J. Dewulf ^d, F. Ludwig ^e, S.E. Werners ^e, P.C. Struik ^f




Current Opinion in Environmental
Sustainability

Volume 18, February 2016, Pages 99-106



Social media as a new playing field for the governance of agro-food sustainability

TM Stevens ¹ , N Aarts ¹, CJAM Termeer ², A Dewulf ²

Understanding disruption and extension

- Answering questions such as:
 - How do extension providers adjust? Start-ups, new business models?
 - New advisory alliances for cross-sectoral systems and emerging issues (e.g. data cooperatives)
 - Interaction data-farmer- advisor, the rise of the 'augmented advisor', virtual advisory encounters?
 - Data science on extension
 - Advisory platform technologies?



The human/organisational side of transformation and disruption and extension

- Financialization, scale increase, disruptive technologies, migrant labour, multifunctionality etc. impact on the farmer and workers
- Questions:
 - How does extension deal with finance, worker management, succession planning?
 - How does extension engage with the human side of farming, e.g. joy, stress and mental health issues? What does this mean for the professional profile?



Money talk: How relations between farmers and advisors around financial management are shaped

Aniek Hilken^{a,*}, Janet I. Reid^b, Laurens Klerkx^b, David I. Gray^a



Agronomy for Sustainable Development (2019) 39: 2
<https://doi.org/10.1007/s13593-018-0547-x>

REVIEW ARTICLE

Advice and advisory roles about work on farms. A review

Anne-Charlotte Dockès¹ · Sophie Chauvat² · Pastora Correa³ · Amélie Turlot⁴ · Ruth Nettle⁵

Expl Agric.: page 1 of 15 © Cambridge University Press 2018. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.
doi:10.1017/S0014479718000315

CONSIDERING THE FARM WORKFORCE AS PART OF FARMERS' INNOVATIVE BEHAVIOUR: A KEY FACTOR IN INCLUSIVE ON-FARM PROCESSES OF TECHNOLOGY AND PRACTICE ADOPTION

By GABRIELA COFRE-BRAVO[†], ALEJANDRA ENGLER^{†‡§},
LAURENS KLERKX[¶], MARCELO LEIVA-BIANCHI^{††},
CRISTIAN ADASME-BERRIOS^{††} and CRISTIAN CACERES^{††}

The international dimension of extension

- Internationalization of extension in view of global transition pathways
- Global flow of extension models versus context specificity
- Global social media networks
- Questions such as:
 - How do (formal and informal) advisors operate cross-culturally?
 - What adaptation dynamics (do not) take place? In terms of technologies and methodologies?



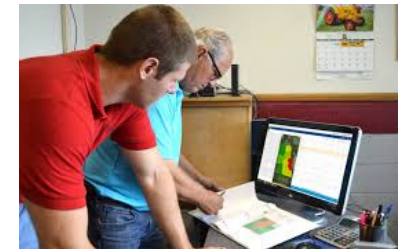
Dynamics and distribution of public and private research and extension roles for technological innovation and diffusion: Case studies of the implementation and adaptation of precision farming technologies

C. Eastwood ^{a, b, *}, L. Klerkx ^c, R. Nettle ^a



The eco-material side of extension

- Different farming styles and transition pathways have different and new (im)material contexts
- Sometime also 'hybrid' material contexts (e.g. agroecology + digital)
- Raises question such as:
 - How do farmers and advisors engage with these hybrid material contexts?
 - How does it affect their advisory encounters?
 - What does it imply for tool affordances and method design?
 - What does it imply for advisor training?
 - The influence of data vs. the human advisor in advisory encounters?



Education and training

- Renewed attention to advisor training and learning. Emerging questions:
 - Digital natives and advisory services: what does it imply for training next generation advisors?
 - What about advisory ethics in view of diversity and power dynamics?
 - How do social and natural science graduates and different sorts students at technical schools perceive and enact transition pathways?

RådNu.

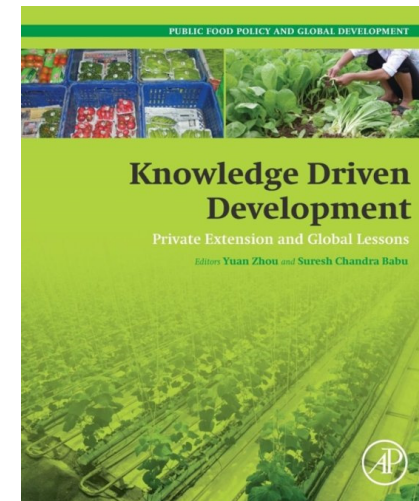
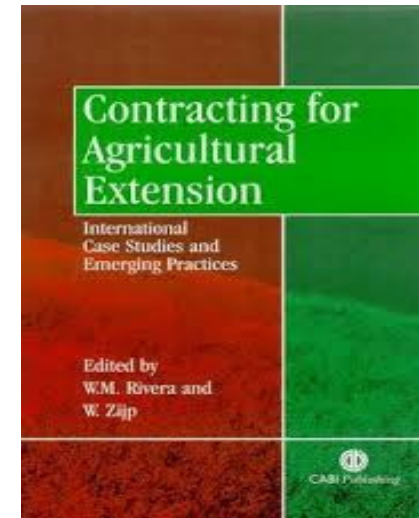
Kompetenscentrum
för rådgivning



landbridge:
A knowledge exchange network
for rural professionals

Global comparison

- Phenomena of transformation, disruption and plurality occur across the globe
- However, timing, nature and pace of change may differ
- Questions:
 - What similarities and differences can be seen in terms of how changes unfold?
 - What are the underlying determinants?
 - Do we see new 'grand models' emerging (within diversity)?



Which theories can help us?

- Extension science has always been pluralist in terms of theories (psychology, sociology, economics, etc.)
- Expanding the toolbox, a few possibilities:
 - Practice theories
 - Organization studies: organizational identity
 - ANT and assemblage theory: actors and actants, socio-material flows
 - STS: innovation cultures
 - Economics and management: e.g. digital business model theory
 - Social network analysis

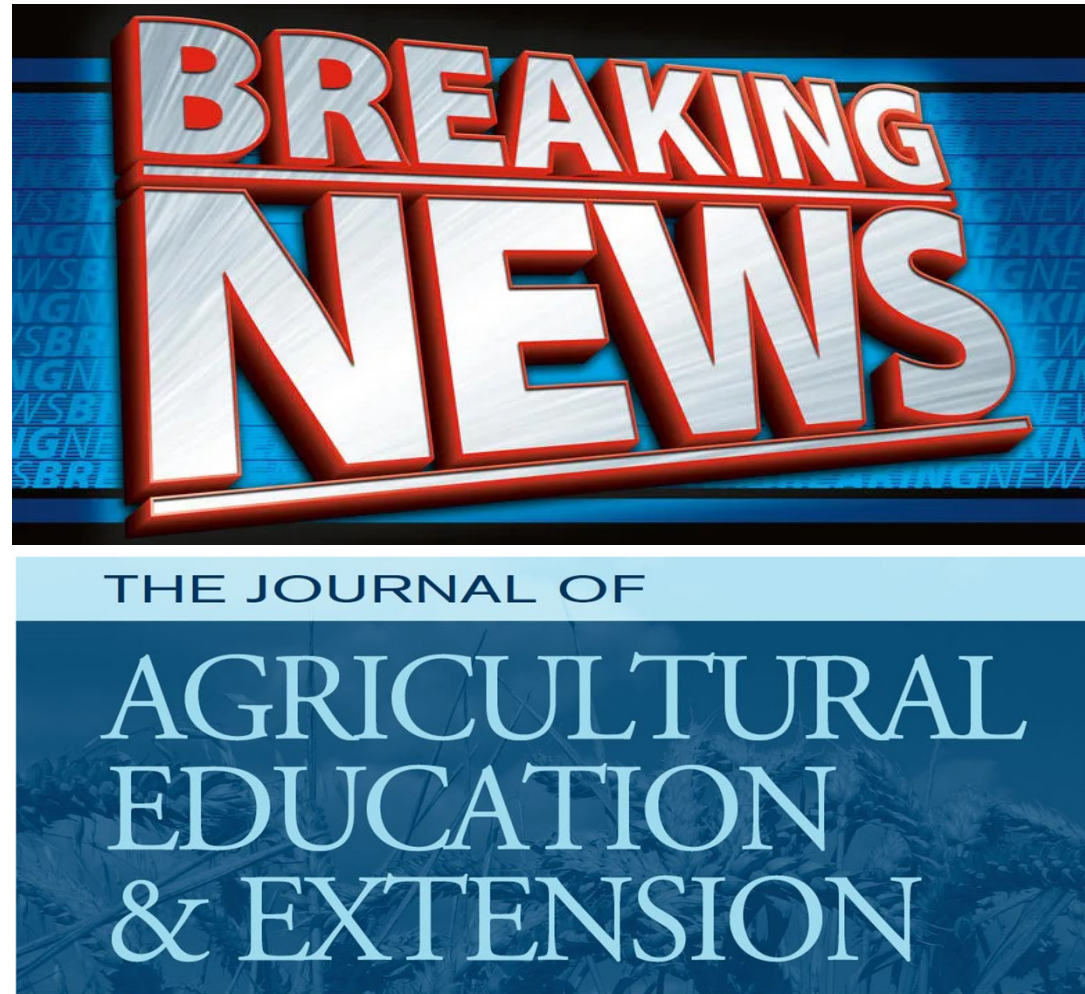
Does this have any practical and policy relevance?

- Informing adjustments in advisor training (initial and continuous)
- Supporting organizations to make sense of change dynamics
- Highlighting inclusion and exclusion effects
- Counteracting power imbalances in advisory systems
- Taking into account the diversity of systems in policy targeting



Where to publish all this great new work?

- JAEE will be indexed in Thomson Reuters Social Sciences Citation Index!
- Impact factor will be released later this week



Thanks for your attention and have a great conference!

